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# Nuclear Fingerprinting Identification of Black Fly Species in the Simulium jenningsi Species Group (Diptera: Simuliidae)

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To the Graduate Council:

I am submitting herewith a thesis written by Gail Lynn Senatore entitled "Nuclear Fingerprinting Identification of Black Fly Species in the Simulium jenningsi Species Group (Diptera: Simuliidae)." I have examined the final electronic copy of this thesis for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Master of Science, with a major in Entomology and Plant Pathology.

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# NUCLEAR FINGERPRINTING IDENTIFICATION OF BLACK FLY SPECIES IN THE *SIMULIUM JENNINGSI* SPECIES GROUP (DIPTERA: SIMULIIDAE)

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## Abstract

A molecular approach was taken to differentiate morphologically homogeneous species within the *Simulium jenningsi* species group (SJG). This group of Nearctic black flies consisting of 22 recognized species has its highest diversity in the southeastern United States. No other group of black flies in this region is more ubiquitous or pestiferous. Female black flies in this group are nearly isomorphic, which complicates identification, elucidation of host specificity and pest status, and directed control of through application of Bti in the appropriate natal streams. Among SJG species, only *S. luggeri* Nicholson & Mickel, *S. jenningsi* Malloch, and *S. penobscotense* Snoddy & Bauer have well documented medical and veterinary importance. However, in the Deep South these three species are uncommon or not present (*penobscotense*), so other group species must be to blame for causing human discomfort. The objective of this study was to use sequences from the nuclear gene *speckle* (IKappaB kinase complex) for identification of and phylogenetic resolution among SJG species. The ultimate application of the fruits of this project is enabling the identification of pest females. Several positively identified individuals (mostly pupae) of each species were used as standards against which unknowns can eventually be compared. Parsimony and Bayesian phylogenetic analyses were conducted. The data obtained permitted identification of all morphospecies except *S. nyssa* Stone & Snoddy, *S. infenestrum* Moulton & Adler, and *S. penobscotense*. It could not resolve relationships within the *fibrinflatum* (*fibrinflatum* Twinn, *notiale* Stone & Snoddy, *snowi* Stone & Snoddy, and *underhilli* Stone & Snoddy) and *taxodium* (*taxodium* Snoddy, *lakei* Snoddy, *chlorum* Moulton & Adler, *confusum* Moulton & Adler) complexes. A large degree of polymorphism was observed within several species, possibly indicative of introgression or highly polymorphic antecedent species.

## Table of Contents

**Section** **Page**

## Introduction

### i. General Black Fly Life History

Occurring worldwide, with the exception of Antarctica and some small oceanic islands, black flies (Diptera: Simuliidae) are truly a ubiquitous group of aquatic flies associated with lotic waters (Adler 2005). Over 1700 species of black flies have been described, with 234 of them in North America (Adler et al. 2004). Of the North American simuliids, approximately one-third cause some range of discomfort to humans, livestock, and birds. With the exception of one species complex, gravid female black flies prefer to oviposit in a location similar to their ancestral habitat (Adler et al. 2004). The immature stages are mainly found in freshwater lotic communities (Stone & Snoddy 1969). Black flies rely on moving water for larval development. While more than one species of black fly can occur in the same area, each species has its own range of temperatures that leads to maximum individual fitness during development (Adler et al. 2004). Species distribution is influenced by habitat creation due to topography (Stone & Snoddy 1969) and by contemporary and historical factors (Adler et al. 2004). Different species of black flies display specific tolerance levels for surviving in certain habitats. Interactions between biotic and abiotic factors can cause certain species to be present or absent in a specific location (Ross & Merritt 1987).

Black fly eggs play a minor role in the stream system biotic process and are difficult to target with control measures (Colbo 1987). Oviposition occurs during flight, landing on a surface, or sometimes a combination of the two. Female black flies commonly deposit eggs directly onto the water's surface or onto a wetted substrate (Adler et al. 2004). Oviposition strategies are known for only a small percentage of species. Once laid, the eggs are susceptible to desiccation. The eggs tend to sink into the sediment before development takes place, which can take four days

to eight months, depending on whether the species undergoes diapause (Currie 1986). Habitat conditions, such as temperature changes and sediment disturbances, act as developmental cues. As the egg matures, larval eyespots and the egg burster can be seen through the chorion (Currie 1986). The larva's cephalic egg burster facilitates eclosion from the egg (Adler & Kim 1985).

Compared to the egg, the larval stage is more specialized in its requirements for successful development. Ranges of ecological tolerance vary widely for different black fly species (Stone & Snoddy 1969). Larvae attach themselves to underwater substrates, such as rocks and vegetation, in currents by spinning a silk attachment pad onto the selected substrate (Adler et al. 2004) and using a ring of tiny hooks on their posterior end (= posterior circlet) (Adler & Kim 1985) to hold themselves in place. Larvae spend a majority of their develipment feeding. Filter-feeding species have elaborate labral fans that passively capture fine particulate organic matter (FPOM) in the water. These larvae position themselves at specific angles on the chosen substrate to take advantage of the flow of water. The two fans are positioned in such a way that one fan collects in the main flow while the other collects from vortices from the substrate (Adler & McCreadie 2002). In fast-flowing water larvae tend to have relatively small, robust fans, while in slow-moving water they have larger, more delicate fans (Currie & Craig 1987). The size of the fan is in comparison to the larval head. There are a few species, however, that have lost their fans and are predators or scrapers (Stone & Snoddy 1969).

Larvae can relocate to another location in the habitat by drifting. The larva attaches a mooring line of silk to the substrate, then translocates in the current after releasing itself from the original substrate (Adler & Kim 1986). This life stage can be completed in a matter of weeks to several months, depending on factors such as temperature and nutrition (Stone & Snoddy 1969),

and generally consists of at least six interstadial molts. The final instar larva uses salivary silk to spin a cocoon in preparation for pupation (Currie 1986).

During “apolysis”, the process during which the larval cuticle separates from the epidermis, the last larval instar is called a “pharate pupa” (Adler et al. 2004). The pharate pupa is still capable of moving and selects the site to anchor the cocoon. Once secured, there is no potential for movement in the stream continuum, regardless of changing conditions, such as velocity or beaching (Colbo 1987). The cocoon houses and protects the developing adult. Generally, species that preferentially develop in fast flowing streams spin a cocoon that is tightly woven, whereas those developing in very slow flowing habitats often have rudimentary, loosely strewn ones. Pupation sites may be different from the larval habitats. Pharate pupae of some species, such as those of *Stegopterna* Enderlein, move into the substrate to pupate and as a result their pupae are often difficult to collect. Cocoons have several different forms that often are characteristic of the species or higher-level taxon to which it belongs (Stone & Snoddy 1969). Cocoons are oriented with the posterior end directed towards the current. The pupal stage can last a few days to a few weeks and duration is influenced by temperature (Adler et al. 2004). Species pupating in cold streams at high altitudes characteristically have longer development times (Currie 1986). Once the adult is ready to emerge, a slit forms along the anterodorsum of the pupal cuticle. The adult then travels to the surface of the water in a gas bubble.

Upon reaching the surface, adult black flies are capable of flight and reproduction. Initial dispersal flights of adults are used to find mates, food sources or hosts, and breeding sites (Adler et al. 2004). For sexually reproducing species, copulation occurs almost immediately after emergence (Stone & Snoddy 1969). Male black flies utilize swarming in order to mate with females but it is not a prerequisite (Wenk 1987). Both males and females take sugar meals but

females generally require blood meals for egg maturation (anautogenous), although sometimes not for their first gonotrophic cycle. Females can produce about 100-600 eggs in one batch and females of certain species may lay several of these egg batches in a lifetime (Adler & McCreadie 2002). Males tend to develop more quickly and emerge before females. This phenomenon is common in Simuliidae; males create aerial swarms that females enter, where they are intercepted by males and copulate. The lifespan of adult black flies tends to be less than one month (Adler & McCreadie 2002), so within that time they mate, find food sources, take blood meals, and oviposit. Females of some species can undergo several gonotrophic cycles.

Parasites of black flies include a variety of mermithid nematodes, fungi, protozoans, and viruses. These parasites appear to have a broad host range (Molloy 1987). Each parasite has its own unique interaction with its host and level of disease severity. Excluding the egg, all life stages of black flies can be targeted. However, if the parasitism inhibits metamorphosis of its host, it could be inhibiting its own dispersal (Molloy 1987). A wide range of parasites and pathogens that could be control agents have been identified but much additional research is needed into propagation and field feasibility of these potential management tools (Lacey & Undeen 1987). *Bacillus thuringiensis* var. *israelensis* (Bti) (serotype H-14) has demonstrated effective larval control against some species of black flies (Gaugler & Finney 1982). Vectobac® (Valent Biosciences, Walnut Creek, CA) is the current and most widely used Bti formulation against larval black flies.

Black flies are an important source of distress from both recreational and agricultural standpoints. The abundance of black flies results in less enjoyment from outdoor recreational activities and agriculture suffering economic losses in production and control efforts (Kim & Merritt 1987). Black flies typically are ornithophilic or mammalophilic, and their host specificity

can vary (Adler 2005). Some species of black flies feed on humans even when other hosts are available, but no single species is considered to be anthropophilic (Crosskey 1990). Females searching for a host can use swarming behavior. Individual flies in these swarms can annoy humans and animals alike just by being around the face and or entering the eyes, ears, nose, and mouth (Currie 1986), with or without biting the host. Many black fly species have an important medical impact. Female black flies feed on their host by first lacerating the skin and then consuming the pooled blood (Crosskey 1990). During feeding the fly may introduce disease-causing organisms into its host. Some species are capable of being vectors of pathogens such as *Onchocerca* spp. and *Leucocytozoon* spp. One of the most common disease associations with black flies is with *Onchocerca volculus*, the nematode that causes river blindness. This disease is a serious problem in Africa, where it is vectored mainly by *Simulium damnosum*. Members of the *S. jenningsi* species group are not known to be vectors of river blindness or any other pathogen. However, swarms can annoy livestock to the point where the animals deviate from normal behaviors, which can put their lives at risk. Animals bitten during massive attacks may experience toxemic shock or excessive blood withdrawal and may not be able to recover (Adler et al. 2004). In humans, black fly bites can range from being unpleasant to possibly life threatening, but rarely lead to death. Infections from bites can occur mostly due to allergic reactions which may be severe. If an individual experiences headache, nausea, fever, and swollen lymph nodes in the neck, they may have what is referred to as “black fly fever” (Hill et al. 2008), a severe allergic reaction. This “fever” can range in severity, and the individual may miss work and seek medical attention or hospitalization (Crosskey 1990).

### ii. *Simulium jenningsi* Species Group

Prior to the mid-1900s, the *Simulium jenningsi* species group of Nearctic species went largely undetected during collecting and describing campaigns in northern parts of the continent where many of its constituent species either do not occur or are found in large rivers that are difficult to survey (Moulton & Adler 1995). The *S. jenningsi* species group was originally placed in the subgenus *Simulium* (*Phosterodoros*) by Stone and Snoddy (1969). However, it was subsequently synonymized with *Simulium* (*Simulium*) and relegated to species group status by Moulton & Adler (1995). Currently there are 22 known species in the group (Fig. 1, Table 1).

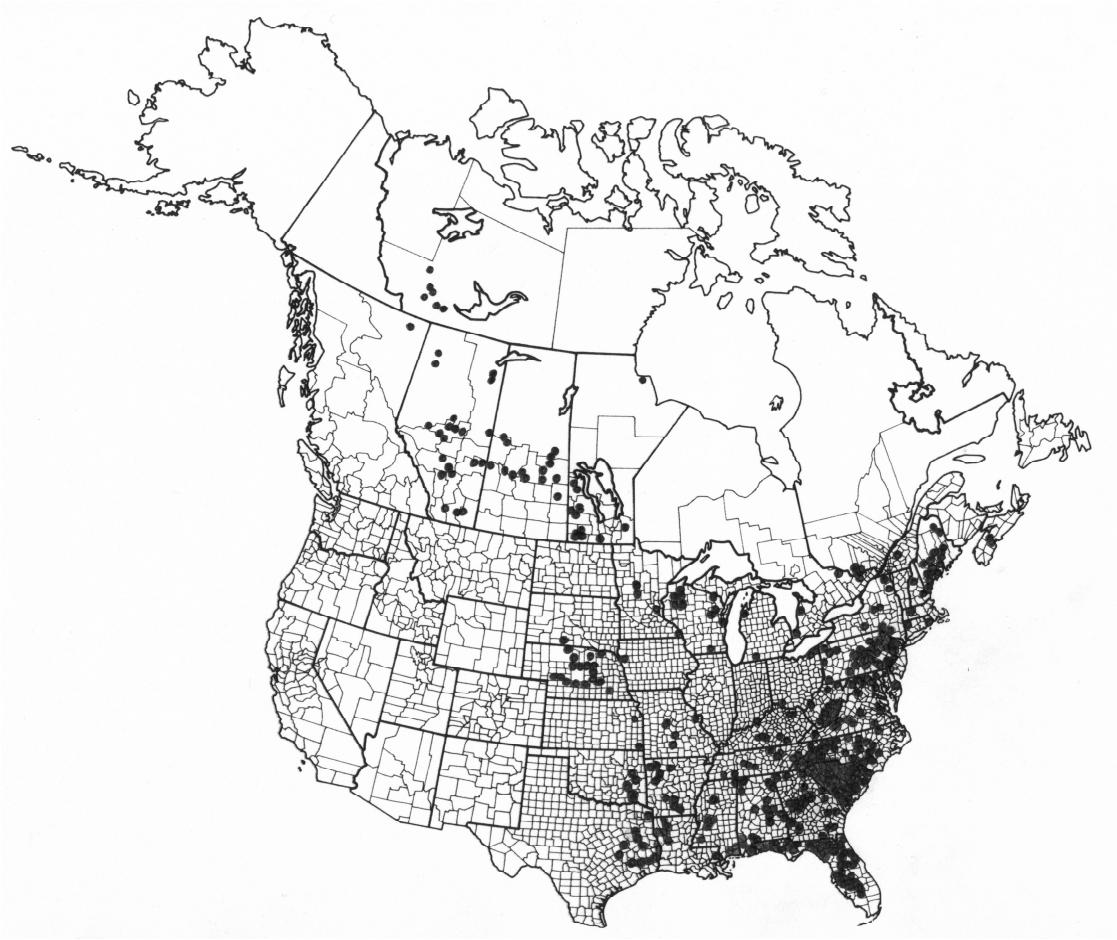

Figure 1: Known Distribution of *S. jenningsi* Species Group Members. Localities are indicated by black dots. (After Adler et al. 2004)

Table 1: Members of the *S. jenningsi* Species Group (Moulton & Adler 1995).

Indented names preceded by "=" are major recognized synonymies.

| **Species** | **Author** |
|---|---|
| *S. (S.) anchistinum* | Moulton & Adler 1995 |
| *S. (S.) aranti* | Stone & Snoddy 1969 |
| *S. (S.) chlorum* | Moulton & Adler 1995 |
| *S. (S.) confusum* | Moulton & Adler 1995 |
| *S. (S.) definitum* | Moulton & Adler 1995 |
| *S. (S.) dixiense* | Stone & Snoddy 1969 |
| *S. (S.) fibrinflatum* | Twinn 1939 |
| = *S. (S.) underhilli* | Stone & Snoddy 1969 |
| *S. (S.) haysi* | Stone & Snoddy 1969 |
| *S. (S.) infenestrum* | Moulton & Adler 1995 |
| *S. (S.) jenningsi* | Malloch 1914 |
| = *S. (S.) nigroparvum* | Twinn 1936 |
| *S. (S.) jonesi* | Stone & Snoddy 1969 |
| *S. (S.) krebsorum* | Moulton & Adler 1992 |
| *S. (S.) lakei* | Snoddy 1976 |
| *S. (S.) luggeri* | Nicholson & Mickel 1950 |
| *S. (S.) notiale* | Stone & Snoddy 1969 |
| *S. (S.) nyssa* | Stone & Snoddy 1969 |
| *S. (S.) ozarkense* | Moulton & Adler 1995 |
| *S. (S.) penobscotense* | Snoddy & Bauer 1978 |

Table 1 (Cont.)

| **Species** | **Author** |
|---|---|
| *S. (S.) podostemi* | Snoddy 1971 |
| *S. (S.) remissum* | Moulton & Adler 1995 |
| *S. (S.) snowi* | Stone & Snoddy 1969 |
| *S. (S.) taxodium* | Snoddy & Beshear 1968 |

iii. SJG Species Group Ecology

The greatest diversity within the SJG is concentrated in the southeastern part of the United States (Moulton & Adler 1995). This species group is the most diverse in the southeast due to habitat diversity and population densities during the summer months (Moulton & Adler 1992). A number of species occur as far north as Canada, such as *S. fibrinflatum* in Ontario and Quebec (type locality = Ottawa River) in the east and *S. luggeri* in Yukon Territory (Currie 1986; Twinn 1936). *Simulium penobscotense* Snoddy & Bauer is the only species in the group known only from northern latitudes. Several species, particularly those that occur in larger streams and rivers, are widespread, including *S. jenningsi, S. luggeri, S. fibrinflatum, S. anchistinum, S. nyssa, S. confusum,* and *S. podostemi* (Moulton and Adler 1995; Adler et al. 2004). At the other extreme, *Simulium remissum* Moulton & Adler appears to be endemic to the upper New River in northeastern North Carolina and southern Virginia (JK Moulton, personal communication). *Simulium dixiense* and *S. krebsorum* are largely restricted to acidic tannin-strained streams of the Sandhills ecoregion of the southeastern US (Moulton & Adler 1995). *Simulium underhilli* and *S. snowi* were discovered during a survey of biting Diptera of the Tennessee Valley by Snow et al. (1958).

### iv. SJG Species Group Biology

*Simulium jenningsi*-group species are multivoltine, producing two to four or more generations during the year (Adler et al. 2004). Depending on the species and location, immature stages can be found at different times during the year (Table 2). At northerly latitudes larvae, pupae, and adults are present from late spring through early autumn, while the last generation of eggs are in diapause until the following spring (Ross & Merritt 1987). In the Deep South of the United States, some species, for instance *S. dixiense, S. haysi,* and *S. lakei*, appear to undergo continuous development (Moulton & Adler 1995; Adler et al. 2004).

Table 2: List of typical habitat regions and times of the year species are present (Moulton & Adler 1995)

| **Species** | **Typical Habitat Region** | **Bionomics** |
|---|---|---|
| *S. anchistinum* | Piedmont region; swift, sand- and rock-bottomed rivers | Eggs overwinter; larvae present late March to mid-December |
| *S. aranti* | AL, GA, & SC; wide, flowing rivers with rock outcroppings | Larvae present between mid-March into early April to early November |
| *S. chlorum* | Small, slow streams with stones in upstate SC | Eggs overwinter; larvae present from late March into early April to mid-November |
| *S. confusum* | Piedmont region to central states; sand-bottomed streams and rivers | Larvae & pupae present from late March to late November |
| *S. definitum* | PA to SC; streams of 1$^{st}$ or 2$^{nd}$ order | Eggs overwinter; immatures by mid-March/ into early April to early autumn |

Table 2 (Cont.)

| Species | Typical Habitat Region | Bionomics |
|---|---|---|
| *S. dixiense* | Coastal Plain (clear & blackwater streams) and Sandhills (SC to MS) | Eggs, larvae, and pupae overwinter, depends on latitude and spring-water influence |
| *S. fibrinflatum* | Ontario & ME down Appalachians & Piedmont to AL & GA | Larvae & pupae from May to October in NE and March to December in SE |
| *S. infenestrum* | Western NC and SC; moderately wide streams w/ rocky bottoms | Larvae & pupae from early May to mid November |
| *S. jenningsi* | Most of eastern N. America; streams and rivers 6 to >300m wide | Eggs overwinter; completes up to five generations annually |
| *S. jonesi* | Piedmont and Costal Plain and Delaware to Texas | In South, larvae & pupae present from mid March to December |
| *S. krebsorum* | Sandhills and adjacent portion of the Coastal Plain of NC and SC | Eggs overwinter; Larvae & pupae mid March to November |
| *S. lakei* | Atlantic Coastal Plain from DE to FL | Eggs overwinter; In FL, Larvae & pupae present year long |
| *S. luggeri* | Northern, bounded by Sandhills and Coastal Plain, extends West | Eggs overwinter; up to 5 generations in Canada |
| *S. notiale* | Widespread east of Appalachians | Larvae present in SE from March to November |
| *S. nyssa* | Shallow rapids of streams/rivers from ME to AL and AR | Eggs overwinters; 3 generations in ME and 4-5 in AL |
| *S. ozarkense* | Ozark Mountains and Plateau, Bluegrass region of KY, & e. TX | Eggs overwinter |
| *S. remissum* | Only known from upper New River in w. NC and VA | Eggs overwinter |
| *S. snowi* | Only known from 4 counties in AL; clear, rocky, inland streams | Larvae & pupae present from early April to early November |

Table 2 (Cont.)

| Species | Typical Habitat Region | Bionomics |
|---|---|---|
| *S. taxodium* | Apalachicola region sw GA, e. FL panhandle, and central NC & SC | Larvae present March to November; might be continuous in FL |

v. Medical and Veterinary Importance

Adults of *S. jenningsi* species group members are known to feed on mammals, and occasionally on birds, or are presumed to be mammalophilic. Males and females have similar mouthparts but different food sources. Female mouthparts are adapted for puncturing and blood feeding. Most, if not all, members of the species group are anautogenous, meaning they must take blood meals to mature the eggs (Adler & McCreadie 2002). Males feed on nectar and do not take any blood meals. Potential host choices for adult females include humans, horses, livestock, turkeys, and some game animals such as elk. Not all species share the same host. The severity of adult swarming around or biting their hosts can mark certain species as economic pests. Some of these pests may even be considered as medically important.

Several SJG species have been identified as human pests (Adler et al. 2004), of which the most important are *S. jenningsi* and *S. penobscotense*. Besides the noticeable economic losses attributed to black flies, there are economical returns in the areas of management, protection, medical, and veterinary industries (Adler et al. 2004). In Pennsylvania, a black fly suppression program has been organized to selectively target four target pest species in the SJG (PDEP 2012). These particular species are the most common black fly pests reported in Pennsylvania. Sampling is conducted in areas where complaints have been made and identification of the pest is conducted before Bti treatments are applied. This program, however, is expensive. In 1993, approximately $1.58 per person was spent to suppress *S. jenningsi* alone in an area with more than 2 million

people (Arbegast 1994). Currently, millions of dollars are still expended to treat thousands of river miles against the same species. Suppression of *S. jenningsi* in the greater Newport area in eastern Tennessee using Vectobac® has been ongoing since 2007.

Biting female flies can disrupt normal activities, which in turn has a negative impact on livestock and poultry production (Adler & Kim 1986). *Simulium jenningsi* and *S. luggeri* are two of the major species of the group that are regarded as pests in North America. In recent years, *S. luggeri* has started replacing another species, *S. arcticum*, in the Saskatchewan River (Fredeen 1987). Severe outbreaks have occurred and in one particular year, financial losses of beef and dairy producers were estimated at more than $2.9 million (Fredeen 1985).

*Simulium jenningsi* can serve as a vector of *Onchocerca lienalis,* the causative agent of bovine onchocerciasis in cattle. The economic impact of bovine onchocerciasis, however, has yet to be fully determined (Adler et al. 2004). Species that feed on turkeys are potential vectors for *Leucocytozoon smithi*, a malaria-like affliction of birds (Adler et al. 2004). Compared to bovine onchocerciasis, leucocytozoon diseases at least once had a high economic impact. In the United States from 1942 to 1951, mortality of domestic turkeys infected with *L. smithi* resulted in an annual loss of $708,000 (Agricultural Research Service 1954). The current severity of the disease is unknown. The adult female flies can pose a direct risk in that they are small enough to be inhaled easily by livestock, which can lead to asphyxiation by blockage of respiratory passages (Tucker 1918) or to infections resulting from the inhalation (Atwood 1996).

### vi. Difficulties with Taxonomy

Not all members in the *S. jenningsi* species group are known to be pest species. The considerable difficulties in determining species identities are due to the structural homogeneity of

the group, particularly females (Moulton 2000). Some characteristics that can be used to distinguish SJG females from other simuliids, are the bare central surface on the wing subcosta, simple tarsal claws, and hypogynial valves with an anterior, setose, weakly sclerotized and a posterior, non-setose, well-sclerotized portions (Moulton & Adler 1995). The pupa, with its multiply branched respiratory gill, is the most easily diagnosable stage in the group. Other useful features of the pupae are the presence of an anterolateral aperture in the cocoon (most species); number and branching pattern of gill filaments and their lengths relative to the pupal body; and shape of the cocoon (Moulton & Adler 1995). Males of some species, most notably *S. aranti, S. podostemi,* and *S. krebsorum,* can also be distinguished, although in many cases only with great difficulty. Males, however, are rarely observed in nature so they are not as useful in identification. Larval morphology, especially for those with fully formed gills, coupled with habitat type and geographical location, can be used to identify some species, but often several similar species co-inhabit streams, particularly in the southeastern U.S. Moulton and Adler (1995) used a combination of characters, such as body color, size and shape of the postgenal cleft, headspot pattern, and presence and relative size of ventral abdominal tubercles to separate several species. The only truly distinctive females are those of *Simulium aranti*, with yellow stem vein setae and striped scutum.

Historically, the only way to identify adults in the group was through rearing so that the adults could be directly associated with the more diagnostic pupal stage (Stone & Snoddy 1969), even though not all species can be reliably separated with this method. Traditional taxonomic approaches to species separation generally are inadequate due to the lack of reliable and available characters. One powerful means of differentiating SJG taxa is through the use of polytene chromosome analysis of larval salivary gland tissue (P.H. Adler, personal communication).

Obtaining usable polytene chromosomes from female Malpighian tubule or ovarian tissue is exceedingly difficult, however, even under ideal conditions, and therefore is not readily used to identify pest females. SJG females whose immature stages developed quickly in warm waters are likely not possible to diagnose using this method due to insufficient polytenation of chromosomes in suitable tissues. Molecular diagnosis, through DNA fingerprinting and phylogenetics, may be the only approach with enough sensitivity to successfully distinguish females of SJG species, since it is not as limited by specimen condition and preservation method as are other approached.

### vii. Phylogenetic Analysis

Molecular systematics utilizes both taxonomy and phylogenetics to account for organism diversity and evolutionary relationships. DNA barcoding was designed to assist taxonomists with identifying species and to "make the Linnaean taxonomic system more accessible" (Hebert & Gregory 2005). Analysis of species DNA serves as the most direct means of studying genetic variation (Townson et al. 1987). Polymerase chain reactions (PCR) are used in a variety of ways for taxonomic or ecological studies by amplifying, or copying, small amounts of DNA (Hoy 2002). By use of PCR, insect DNA can be sequenced to determine genetic variation between species. Phylogenetically analyzing DNA sequences acquired from all members of the *Simulium jenningsi* species group with construct trees can be used to evaluate inter- and intraspecific variation. In a previous study, Alexander (2007) sequenced a portion of the mitochondrial genome (ND2+CoxI) and a nuclear gene (big zinc finger) from all group members and generated phylogenetic trees for the group. Independent and combined analyses were conducted. The resulting trees were able to recover roughly one-half of the members of the group, with the

nuclear gene outperforming the mitochondrial gene. Additional molecular work was suggested to create a working model for phylogenetic analysis of species.

The purpose of this study was to construct a molecular phylogenetic-based predictive tool (data matrix) with which to identify *S. jenningsi* species group members. This matrix was obtained by sequencing DNA from the nuclear coding gene *speckle*. In order to increase the reliability of the diagnosis, individual, readily identifiable specimens (usually pupae, sometimes larvae) of each species were taken from as many disparate locations within their respective ranges as possible. Once a reliable method is established, field-collected unknown samples (primarily females) can be incorporated into the data matrix to see where they place among the species clades in the phylogeny. At the completion of this research, the data from the nuclear gene *speckle* will be combined with previous molecular data to achieve an even more rigorous diagnostic for identifying females of pest species or other unknown specimens, such as immature larvae.

**Materials and Methods**

Of the 22 species of the *Simulium jenningsi* species-group, all were collected by Dr. Kevin Moulton, Elizabeth Alexander, or by their colleagues at various locations throughout the eastern U.S. and preserved in 95% ethanol (Table 3). A total of 83 individuals from different locations were used in this study. A majority of the individuals sampled were pupae. Five species outside of the *S. jenningsi* species-group were included as outgroups. Based upon morphological characters, *S. verecundum* Stone and Jamnback and *S. tuberosum* (Lundström) served as distal outgroups and *S. apricarium* Adler, Currie, and Wood*, S. decimatum Dorogostaisky* Rubtsov & Vlasenko, and *S. reptans L.* served as proximal outgroups.

Table 3: Samples included and collection locality data.

| Taxa ID | Species Name | Country | State | County | Stream/River |
|---|---|---|---|---|---|
| OUTGROUP | | | | | |
| tuberosum Nol A* | *S. tuberosum* | USA | TN | Greene | Nolichucky River |
| verecundum AA* | *S. verecundum* | USA | SC | Sumter | Scape Ore Creek |
| reptans UK* | *S. reptans* | UK | -- | -- | Unknown |
| apricarium | *S. apricarium* | USA | AZ | Apache | W F Little Colorado |
| decimatum | *S. decimatum* | CAN | INUV | N/A | Unknown |
| INGROUP | | | | | |
| anchistinum Hill | *S. anchistinum* | USA | AL | Tallapoosa | Hillabee Creek |
| anchistinum New R | *S. anchistinum* | USA | NC | Allegheny | New River |
| anchistinum Androsc | *S. anchistinum* | USA | ME | Sagadahoc | Androscoggin River |
| anchistinum ME | *S. anchistinum* | USA | ME | Somerset | Kennebec |
| anchistinum DE | *S. anchistinum* | USA | DE | Northhampton | Delaware River |
| aranti FS GA | *S. aranti* | USA | GA | Meriwether | Flint R. at Flat Shoals |
| aranti SC | *S. aranti* | USA | SC | Oconee | Little R (=Flat Shoal R) |
| aranti GA – pupa | *S. aranti* | USA | GA | Wilkes | Broad R. at Anthony Sh. |
| aranti Hill | *S. aranti* | USA | AL | Tallapoosa | Hillabee Creek |
| chlorum GC1 | *S. chlorum* | USA | SC | Abbeville | Gill Creek |
| chlorum GC3 | *S. chlorum* | USA | SC | Abbeville | Gill Creek |
| chlorum GC4 | *S. chlorum* | USA | SC | Abbeville | Gill Creek |
| chlorum PA1 | *S. chlorum* | USA | PA | Dauphin | Clarkis Creek |
| confusum GC Dark | *S. confusum* | USA | SC | Abbeville | Gill Creek |
| confusum LR | *S. confusum* | USA | TN | Blount | Little River |
| confusum TX | *S. confusum* | USA | TX | Liberty | San Jacinto River |
| confusum GA | *S. confusum* | USA | GA | Bibb | Echeconnee Creek |
| confusum Sabine | *S. confusum* | USA | TX | Penola | Sabine River |
| dixiense CWC FL | *S. dixiense* | USA | FL | Santa Rosa | Coldwater Creek |
| dixiense GA | *S. dixiense* | USA | GA | Taylor | Little Whitewater Cr. |
| dixiense HMP SC | *S. dixiense* | USA | SC | Chesterfield | Little Black Creek |
| dixiense Quewhiffle | *S. dixiense* | USA | NC | Hoke | Quewhiffle Creek |
| fibrinflatum Androsc | *S. fibrinflatum* | USA | ME | Sagadahoc | Androscoggin River |
| fibrinflatum PA | *S. fibrinflatum* | USA | PA | Bucks | Delaware River |
| fibrinflatum GA | *S. fibrinflatum* | USA | GA | Meriwether | Flint R. at Flat Shoals |
| fibrin/under Fish | *S. fibrinflatum?* | USA | GA | Meriwether | Flint R. at Flat Shoals |
| haysi TX | *S. haysi* | USA | TX | Liberty | San Jacinto River |
| haysi AL | *S. haysi* | USA | AL | Conecuh | Burnt Corn Creek |
| infenestrum L | *S. infenestrum* | USA | SC | Pickens | Rocky Bottom Creek |
| infenestrum NC #2 | *S. infenestrum* | USA | NC | Wilkes | Reddies River |
| jenningsi Eno R | *S. jenningsi* | USA | NC | Durham | Eno River |
| jenningsi Brandywine | *S. jenningsi* | USA | PA | Delaware | Brandywine River |
| jenningsi GA | *S. jenningsi* | USA | GA | Wilks | Broad R. at Anthony Sh. |
| jenningsi Flat Crk | *S. jenningsi* | USA | SC | Oconee | Flat Creek |
| jenningsi Ill R, AR | *S. jenningsi* | USA | OK | Adair | Illinois River |
| jenningsi Pigeon R | *S. jenningsi* | USA | TN | Cocke | Pigeon River |
| jonesi BWC | *S. jonesi* | USA | FL | Santa Rosa | Coldwater Creek |
| jonesi Cognac | *S. jonesi* | USA | NC | Richmond | Cognac Creek |

Table 3 (Cont.)

| Taxa ID | Species Name | Country | State | County | Stream/River |
|---|---|---|---|---|---|
| jonesi CWC | *S. jonesi* | USA | FL | Santa Rosa | Coldwater Creek |
| jonesi Taylor Co | *S. jonesi* | USA | GA | Taylor | Whitewater Creek |
| krebsorum NC | *S. krebsorum* | USA | NC | Richmond | Mill Creek |
| krebsorum SC | *S. krebsorum* | USA | SC | Richland | Cedar Creek |
| lakei PA1 | *S. lakei* | USA | PA | Luzerne | Nescopeck Creek |
| lakei SC | *S. lakei* | USA | SC | Williamsburg | Black River |
| lakei FL [larva] | *S. lakei* | USA | FL | Jackson | Chipola River |
| lakei (Taunt. 8-fil) | *S. lakei* | USA | MA | Bristol | Taunton River |
| lakei (Taunt. 9-fil) | *S. lakei* | USA | MA | Bristol | Taunton River |
| luggeri NWT | *S. luggeri* | CAN | NWT | N/A | Unknown |
| luggeri Haw R | *S. luggeri* | USA | NC | Chatham | Haw River |
| luggeri Flat R, NE | *S. luggeri* | USA | NE | ??? | Flat River |
| luggeri KY Green R | *S. luggeri* | USA | KY | Green | Green River |
| notiale RB SC | *S. notiale* | USA | SC | Pickens | Rocky Bottom Creek |
| notiale TN | *S. notiale* | USA | TN | Shelby | Clear Creek |
| notiale BWC 6+6 | *S. notiale* | USA | AL | Lauderdale | Bluewater Creek |
| notiale BWC 5+6 | *S. notiale* | USA | AL | Lauderdale | Bluewater Creek |
| notiale Rivanna R | *S. notiale* | USA | VA | Albermarle | Rivanna River |
| nyssa BWC | *S. nyssa* | USA | AL | Lauderdale | Bluewater Creek |
| nyssa Tar R | *S. nyssa* | USA | NC | Nash | Tar River |
| nyssa Androsc | *S. nyssa* | USA | ME | Sagadahoc | Androscoggin River |
| nyssa Rivanna R | *S. nyssa* | USA | VA | Albermarle | Rivanna River |
| nyssa Piscat | *S. nyssa* | USA | ME | Penobscot | Piscataquis River |
| ozarkense MO1 | *S. ozarkense* | USA | MO | Wright | Gasconade River |
| ozarkense MO2 | *S. ozarkense* | USA | MO | Wright | Gasconade River |
| penobscotense 2 | *S. penobscotense* | USA | ME | Penobscot | Piscataquis River |
| podostemi MS | *S. podostemi* | USA | MS | Tishomingo | Bear Creek |
| podostemi AS | *S. podostemi* | USA | GA | Wilkes | Broad R. at Anthony Sh. |
| podostemi Chick GA | *S. podostemi* | USA | GA | Baker | Chickasawatchi River |
| podostemi Tar R | *S. podostemi* | USA | NC | Nash | Tar River |
| remissum 1 | *S. remissum* | USA | NC | Allegheny | S. Fork of New River |
| remissum 2 | *S. remissum* | USA | NC | Allegheny | S. Fork of New River |
| remissum 3 NC | *S. remissum* | USA | NC | Allegheny | S. Fork of New River |
| snowi BWC 4+4 | *S. snowi* | USA | AL | Lauderdale | Bluewater Creek |
| snowi BWC 4+6 | *S. snowi* | USA | AL | Lauderdale | Bluewater Creek |
| snowi TN | *S. snowi* | USA | TN | Cumberland | W. Fork of Clear Crk |
| taxodium #2 GA | *S. taxodium* | USA | GA | Baker | Chickasawatchie Cr. |
| taxodium FL [larva] | *S. taxodium* | USA | FL | Jackson | Chipola River |
| underhilli GA | *S. underhilli* | USA | GA | Meriwether | Flint R. at Flat Shoals |
| underhilli Hillabee | *Not numbered* | USA | AL | Tallapoosa | Hillabee Creek |

Samples were dried to remove residual ethanol prior to being added to a new vial containing 700uL of lysis buffer (Moulton & Wiegmann 2004). The specimen was then macerated with a pestle before 8uL of 10% proteinase K was added. The mixture was vortexed briefly and held in a heat block at 55°C for 24 hours. The homogenate was spun down and 650uL of a phenol/chloroform/isoamyl mixture was added. The contents of the vial were mixed thoroughly and then centrifuged at 13,000 x g for seven minutes. The top layer was pipetted into a new 1.5-mL microvial to which 650uL of a chloroform: isoamyl alcohol mixture (24:1) was added. The top layer was again removed after mixing and spinning the vial at 13,000 x g for an additional seven minutes. The top layer was again decanted into a new 1.5-ml microvial to which 100uL of sodium acetate (3M) and 840uL pure isopropyl were added. This vial was flicked and centrifuged at 15,000 x g for seven minutes. Excess liquid was decanted decanted carefully avoid dislodging the DNA salt pellet. One milliliter of 70% ethanol was added to the pellet and allowed to stand for five to ten minutes. The liquid was then poured off and any remaining moisture was removed using a centrivap® (Labconco). After drying, 80uL of 0.1M TE was added.

DNA was amplified with polymerase chain reactions (PCR). Combinations of primers used during this study are listed in Table 4. The TaKaRa ExTaq™ Hot Start manufacturer's procedures were modified slightly for this project.

An Eppendorf MasterCycler thermal cycler was used to amplify the DNA. The parameters for the thermal cycler were as follows: 30 minute preheat at 94°C; 4 cycles of 95°C for 15 s, 57°C for 25 s, and 72°C for 1 min and 45 s; 14 cycles of 95°C for 15 s, 53°C for 20 s, and 72°C for 1 min and 45 s; 34 cycles of 95°C for 15 s, 47°C for 15 s, and 72°C for 1 min and 45 s, and a final cycle of 72°C for 7 min. Once the PCR completed, the products were

Table 4: Primers used in this study. Those in bold were the most reliable.

| **Name** | **Fwd/Rev** | **Sequence (5' → 3')*** | **Length** (-mer) |
|---|---|---|---|
| **PCR P1 171F** | **F** | **GTNGGNTGGGGNAARAARGARAC** | **23** |
| **PCR P1 173F** | **F** | **GGNAARAARGARACNCARTTYCAYGG** | **26** |
| PCR P1 Rev | R | ATGCAAGCMAAYAAYAACGYTG | 22 |
| PCR P1 Rev2 | R | GCAATGCAAGCHAAYAAYAACG | 22 |
| PCR P1 Rev3 | R | GAYATTTGTGAYAARATWGAARTCG | 23 |
| **PCR P1R4** | **R** | **TGAAATATCGYGGYAATTTRTATTG** | **25** |
| **PCR P1R5** | **R** | **AARAAAATRGCMTCRGATGTKAC** | **23** |
| PCR P2 Fwd | F | GTTTRCAAGAGAAGAACCT | 19 |
| PCR P2 Fwd New | F | CGTYCMAAGATTAACCARTGYAT | 23 |
| PCR P2 Fwd2 | F | GAACCACAATWCACGATWAAYGA | 23 |
| **PCR P2F4** | **F** | **TCGCMTTRGATGCTGTGAC** | **19** |
| **PCR P2F Novo** | **F** | **GAACCACAATTCACGATYAAYGA** | **23** |
| **PCR P2 958R** | **R** | **GGNARRTAYTCYTTNGGRTCYTTYTG** | **26** |
| **PCR P2 959R** | **R** | **AANGGNAGRTAYTCYTTNGGRTCYTT** | **26** |
| **PCR P2R Novo** | **R** | **GAYTTYGGMTTRGTNTTGTTTGT** | **23** |
| SEQ P1 3iSP | R | ATWTGTGAACCACAATWCACG | 21 |
| SEQ P1 5iSP | F | GGCAACAAATACARGATCAC | 20 |
| SEQ P2 5iSP | F | AAAGYCGRCGAATGGAGCG | 19 |
| SEQ P2 3iSP | R | GATCTGATGCGNAAGCARCG | 20 |
| SEQ P1 3iSP New | R | GAYGCYGTGACTRRHGTCGT | 20 |
| SEQ P1 5iSP New | F | CAYTATCAYTGGTAYTTRAARCARTA | 27 |
| SEQ P2 3iSP New | R | GAYCAYGAYCCAAAKACRTWTT | 22 |
| SEQ P2 5iSP New | F | CCRAARAGTTCAAARTGTRTTTTYCA | 26 |

*** W=A/T; Y=C/T; R=A/G; M=A/C; K=G/T; H=A/T/C; N=A/T/C/G**

electrophoresed in a 1% agarose gel. Bands were viewed under UV light and were excised. A QiaQuick® Gel Extraction kit (Qiagen) was used to purify the bands. After purification, the

products were prepared for sequencing to get both pieces of the products' DNA strand. Applied Biosystem's Big Dye Terminator Cycle Sequencing kit was used once the purified bands were quantified. Reactions were cleaned using Centri-sep columns (Princeton Separations) and dried down by use of a CentriVap Concentrator (Labconco). The purified sequence reactions were electrophoresed again with a MJ Research BaseStation Automated DNA Sequencer (Bio-Rad). Analysis of the final sequence from the BaseStation was performed with the Cartographer v1.2.7 software. Sequencer v4.2.2 software (Gene Codes) was used to pair forward and reverse strands for each species. From Sequencer, the aligned sequences will be exported into NEXUS-formatted files. MacClade v4.8 was used to align nucleotides and amino acids.

For phylogenetic analysis, maximum parsimony (MP) and Bayesian analysis were performed with PAUP v4.0b10 and MrBayes v3.1. FigTree v1.3.1 was used to generate the phylogenetic tree of the species-group and to evaluate node support. Canvas 8 v8.0.5 was used to change weights of tree branches, as well as indicate monophyletic species by coloring the corresponding branches.

**Results and Discussion**

A total of 85 taxa were sampled and sequenced. Approximately 2,000 nucleotides were sequenced from each exemplar, resulting in 170,000 total nucleotides acquired. A total of 13 monophyletic species and two monophyletic species subgroups were recovered after phylogenetic analyses with both maximum parsimony and Bayesian analysis. The Bayesian likelihood tree is depicted as Figure 2. Parsimony analysis resulted in 3248 parsimonious trees of 2900 steps (CI=0.443; RI=0.700; RC=0.311). A majority rule consensus tree is depicted in Figure 3. Overall, node support was greater in the Bayesian than parsimony tree.

Monophyletic groups recovered from both the Bayesian and the maximum parsimony trees were: *S. dixiense, S. haysi, S. ozarkense, S. luggeri, S. krebsorum, S. aranti, S. definitum, S. jenningsi, S. podostemi, S. remissum, S. infenestrum,* and *S. anchistinum*. Several interspecies relationships remain to be resolved. Two species complexes were recovered in both trees: *S. taxodium* and *S. fibrinflatum*. Two species, *S. penobscotense* and *S. nyssa*, were nearly monophyletic (paraphyletic), with a specimen from one locality grouping with the sister species of each, *S. infenestrum* and *S. anchistinum*, respectively.

The basal-most (i.e., sister group to remaining SJG species) taxa recovered were *S. dixiense, S. aranti* and *S. luggeri* for the Bayesian tree and *S. dixiense, S. haysi, S. ozarkense, S. luggeri* and *S. krebsorum* for the parsimony trees. The parsimony tree presented is a majority rule consensus of several trees in which relationships among these species resulted in an unresolved polytomy. Based upon presence of sexual dimorphism of larvae, presence of large larval ventral tubercles, pupal gill greater than two-thirds of the length of the body, shape of the male ventral plate, and swamp stream havitat, the presence of *S. haysi* as one of the most basal lineages in the group is likely an artifact, possibly resulting from long-branch attraction. When the analysis is constrained to force the species with large ventral tubercles to be monophyletic (data not shown), *S. haysi* pairs with *S. krebsorum* and forms the sister group to the remaining species sharing this character state, as seen as *S. definitum* + *S. jonesi* as the sister group to the *S. taxodium* subgroup. Potential support for a *S. haysi* and *S. krebsorum* pairing is the fact that they are the only species in the SJG possessing a 7-filamented gill (Moulton & Adler 1992).

The *S. taxodium* species complex clade includes *S. taxodium, S. confusum, S. lakei,* and *S. chlorum*. Species in this complex share a similar range through the South Eastern portion of the United States and typically occur in medium to large sandy-bottomed streams and rivers. These

species are also very similar morphologically and are only reliably separated with polytene chromosome analysis. The *S. fibrinflatum* species complex includes *S. fibrinflatum, S. underhilli, S. notiale,* and *S. snowi.* Two of these species, *S. fibrinflatum* and *S. underhilli*, are currently considered identical and their separation is based entirely on subtle and variable differences in the pupal gill. Currently *S. notiale* and *S. snowi,* are recognized as separate species, but during the course of this and a prior study (Alexander 2007) it was shown that both species can be collected in the same habitat and putative hybrids may exist (pupae with 4 gill filaments on one side and 6 on the other, others with 4+5 and 5+6). Interestingly, none of the species in this subgroup/complex are currently distinguishable using polytene chromosomes.

Lack of resolution in the *taxodium* and *fibrinflatum* subgroups could indicate several different phenomena. For the former, since each has a distinctive karyotype, it is likely that the progenitor of the group was extremely polymorphic or that interbreeding occurred before species trajectories were fully separated. For instance, a form of *S. confusum* from the Gulf Coastal region has a pupal gill much like *S. jonesi*, so much so that it was misidentified as *S. jonesi* by Alexander and Moulton (unpublished).

When considering morphology as a potential means of identifying the members of the two recovered species complexes, some differences have been described. In the *S. taxodium* species complex, larvae are sexually dimorphic. It was hypothesized by Moulton and Adler (1995) that *S. confusum* was a species complex, based largely on the aforementioned form that resembles *S. jonesi*. However, *S. confusum* pupae are similar to *S. definitum*, a basal species, but can be distinguished by having fewer and more distributed granules on the cephalic plate and by the former not being restricted to a 9-filamented gill. *Simulium taxodium, S. chlorum,* and *S. lakei* can easily be confused with *S. confusum.* Larvae of *S. chlorum* are much paler than those of the other

two species, while pupae of these species are less reliably separated. At the population level, *S. taxodium* is most likely to possess 8-filamented gills, those of *S. lakei* 9 filaments, and those of *S. confusum* 10 filaments (Moulton & Adler 1995). *Simulium taxodium* is unique within this clade in that it possesses a strong burgundy-banded color morph that is otherwise only observed in larvae of *S. jonesi* and *S. haysi.*

Unlike the *S. taxodium* species complex, members of the *S. fibrinflatum* species complex do not have sexually dimorphic larvae and lack differences in polytene chromosome banding patterns. It is possible that only one extremely polymorphic species is present here, but a more parsimonious resolution would be recognition of two species: *S. fibrinflatum* (= *S. underhilli*) and *S. snowi* (= *S. notiale*). The sole morphological difference between these proposed species would be petiolate filaments versus sessile middle or bottom groups of filaments, depending upon whether filaments are arranged as 2 or 3 pairs of filaments.

Two species, *S. nyssa* and *S. penobscotense*, were observed to be paraphyletic, meaning that one or more of the individuals sampled grouped elsewhere (only one node removed), rather than with their putative conspecifics. The *S. nyssa* exemplar from Maine was recovered as the sister to a clade comprised of *S. anchistinum* plus the otherwise monophyletic *S. nyssa.*

The other instance of paraphyly involved the very morphological similar pairing of *S. infenestrum* and *S. penobscotense*, wherein one exemplar of the later was rendered paraphyletic as it grouped with *S. infenestrum*. There is little doubt from morphological examination that these two pairs of species are sister species. The only means of separating *S. nyssa* and *S. anchistinum*, other than polytene chromosomes, is pupal granule distribution (Moulton & Adler 1995). The only means of separating *S. infenestrum* and *S. penobscotense* is size (*S. infenestrum* is the

smallest Nearctic simuliid) and geographical location (South Eastern U.S. versus North Eastern U.S., respectively).

Comparison of phylogenetic inferences from *speckle* and those from big zinc finger (BZF) used by Alexander (2007), showed that the resulting phylogenetic trees shared some similarities but also displayed some differences in topography. Between the two genes, there were 10 shared monophyletic species: *S. aranti, S. luggeri, S. infenestrum, S. jenningsi*, *S. remissum, S. krebsorum, S. haysi, S. ozarkense, S. dixiense, S. jonesi* and *S. definitum*. *Speckle* was able to recover 13 monophyletic morphospecies, compared to 12 for BZF. One monophyletic species exclusive to BZF was *S. penobscotense*, but this could be the result of reduced taxon sampling. A misidentification of one specimen of *S. confusum*, identified as *S. jonesi* from Texas, kept *S. jonesi* from being recognized as monophyletic by Alexander (2007) The specimen, a pupa, was later discovered to actually belong to a well-known deep southern form of *S. confusum.* Three species (*S. nyssa, S. podostemi* and *S. anchistinum*) each were nearly monophyletic with one specimen from a single locality of each grouping with its sister species. *Simulium nyssa* and *S. anchistinum* were sister species to each other while *S. podostemi* paired with *S. infenestrum*.

Both nuclear genes shared *S. aranti* and *S. luggeri* as basal to outgroup species; however, speckle supported other basal species. In the Bayesian analysis, *S. dixiense* was an additional basal group, and for parsimony analyses additional basal groups were *S. haysi, S. ozarkense,* and *S. krebsorum*.

In summary, both nuclear genes studied, *speckle* and BZF, outperformed the mitochondrial data (combined coxI and coxII) analyzed by Alexander (2007). In turn, *speckle* slightly outperformed BZF. Between these nuclear genes, 14 morphospecies and two groups of cryptic species can be identified with high levels of accuracy. With the addition of geographic

source of specimens, one can infer with good confidence which member of the *S. taxodium* group species one has in possession. With the exception of the *S. fibrinflatum* complex members one can identify nearly all SJG members using *speckle* sequences as a diagnostic tool. The benefits for pest identification and control using this method are obvious. Since SJG species have known habitat preferences, judicious use of Bti only in streams suitable for the identified pest species will result in efficacious control at lowest possible cost. At the basic science level, this tool can be used to study host preference of females and preferred oviposition method.

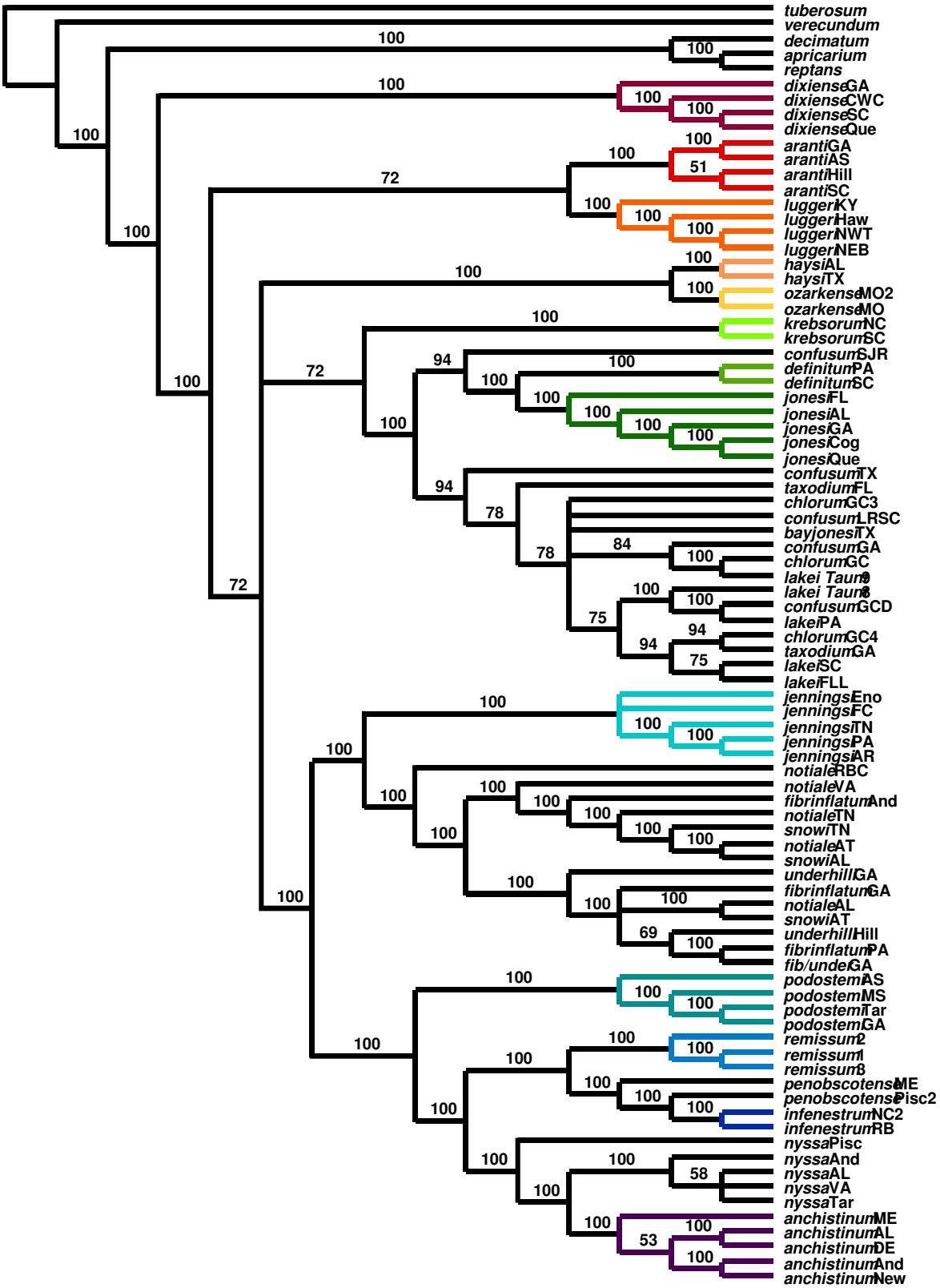


Figure 2: Maximum Likelihood (Bayesian) Tree. Posterior probabilities are node support statistic. Values ≥ 95% are significant

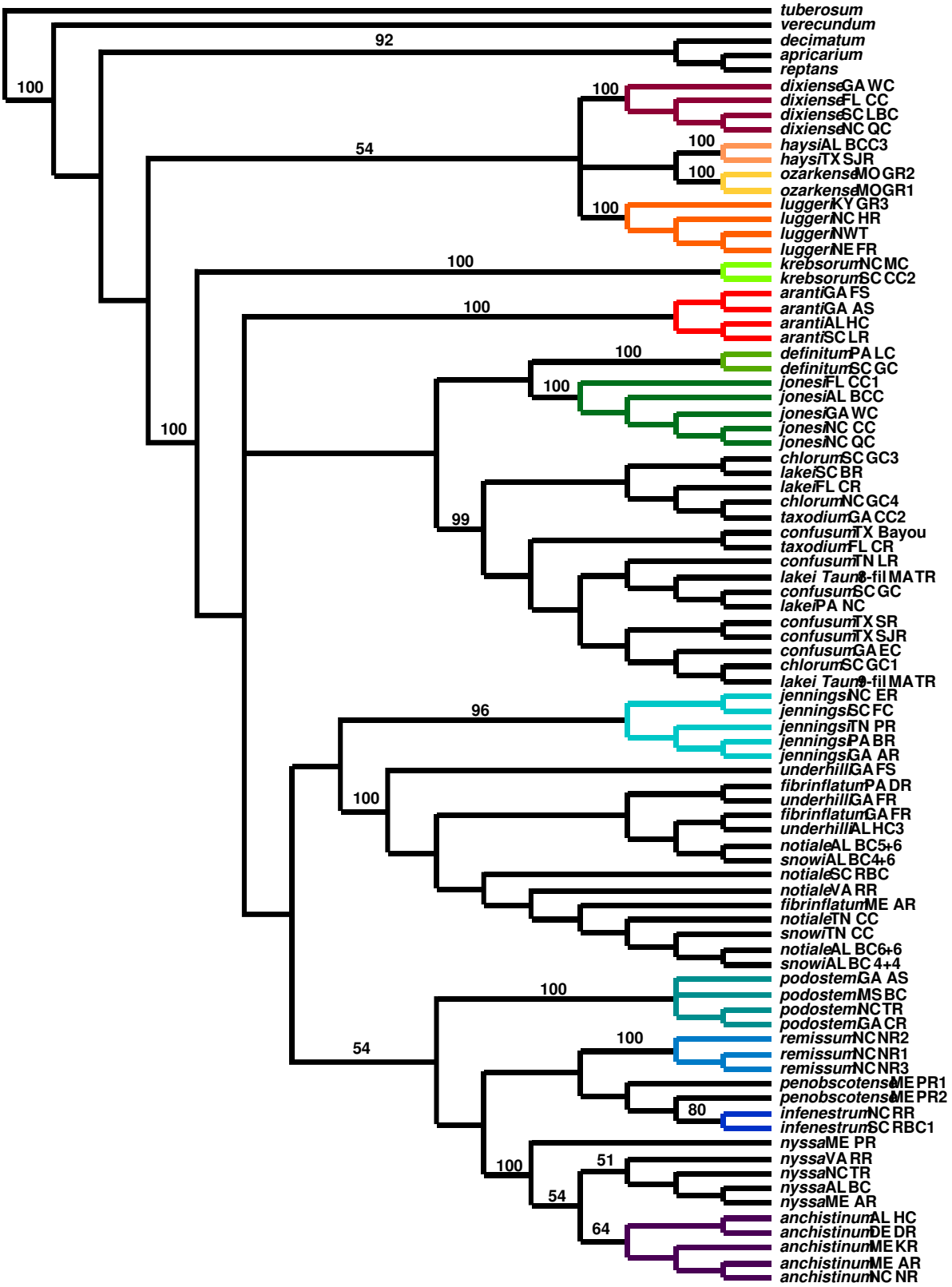


Figure 3. Majority Rule Consensus of 3248 Most Parsimonious trees (2900 steps). Nonparametric bootstrap scores are node support statistic. Values ≥70% are considered significant.

**References**

Adler, P.H., Currie, D.C., Wood, D.M. 2004. The Black Flies (Simuliidae) of North America. Cornell University Press, New York, pp. 941.

Adler, P.H., McCreadie, J.W. 2002. Black Flies (Simuliidae). In: Mullen, G., Durden, L. (Eds.), Medical and Veterinary Entomology. Academic Press, San Diego, pp. 185-202.

Adler , P.H. & K.C. Kim. 1986. The black flies of Pennsylvania (Simuliidae, Diptera). Pennsylvania State University Agricultural Experiment Station Bulletin 865, 1-88.

Alexander, E.A. 2007. Molecular Phylogenetic Analysis of the *Simulium jenningsi* Species-Group (Diptera: Simuliidae). M.S. Thesis, The University of Tennessee, Knoxville, Tennessee.

Arbegast, D.H. 1994. Black Fly Suppression, the Pennsylvania experience. Proceedings of the New Jersey Mosquito Control Association 81, pp. 107-113.

Atwood. D.W. 1996. Distribution, abundance, control, and field observations of the southern buffalo gnat, *Cnephia pecuarum* (Diptera: Simuliidae), in Arkansas. Doctoral Dissertation, University of Arkansas. 127 pp.

Colbo, M.H. 1987. Problems in Estimating Black Fly Populations in Their Aquatic Stages. In: Kim, K.C., Merritt, R.W. Black Flies: Ecology, Population Management, and Annotated World List. The Penn. State Univ., University Park, PA. pp. 77-89.

Crosskey, R.W. 1990. The Natural History of Black Flies. John Wiley & Sons, Chichester. pp. 711.

Currie, D.C. 1986. An annotated list of and keys to the immature black flies of Alberta (Diptera: Simuliidae). Mem. Entomol. Soc. Can. 134, 90 pp.

Currie, D.C., Craig, D.A. 1987. Feeding Stages of Larval Black Flies. In: Kim, K.C., Merritt, R.W. Black Flies: Ecology, Population Management, and Annotated World List. The Penn. State Univ., University Park, PA. pp. 155-170.

Fredeen, F.J.H. 1985. Some Economic Effects of Outbreaks of Black Flies (*Simulium luggeri* Nicholson and Mickel) in Saskatchewan. *Quaestiones Entomologicae* 12, 175-208.

Fredeen, F.J.H. 1987. Black Flies: Approaches to Population Management in a Large Temperate-Zone River System. In: Kim, K.C., Merritt, R.W. Black Flies: Ecology, Population Management, and Annotated World List. The Penn. State Univ., University Park, PA. pp. 295-304.

Gaugler, R., Finney, J. 1982. A review of *Bacillus thuringiensis* var. *israelensis* (serotype 14) as a biological control agent of black flies (Simuliidae). pp. 1-17. In: D. Molloy, Ed., *Biological control of black flies (Diptera: Simuliidae) with* Bacillus thuringiensis *var.* israelensis *(Serotype 14), a review with recommendations for laboratory and field protocol.* 1:1-17. Misc. Pub. Entomolo. Soc. Am. 12(4). pp. 30.

Gray, E.W., Adler, P.H., Noblet, R. 1996. Economic impact of black flies (Diptera: Simuliidae) in South Carolina and development of a localized suppression program. *Journal of the American Mosquito Control Association* 12, 676-678.

Hebert D.N., Gregory, T.R. 2005. The Promise of DNA Barcoding for Taxonomy. Systematic Biology 54(4), 852-859.

Hoy, M.A. 2002. DNA amplification by the polymerase chain reaction: molecular biology made accessible. In: Insect Molecular Genetics: An Introduction to Principles and Applications, Second Edition. Academic Press, pp. 544.

Kim, K.C, Merritt, R.W. 1987. Black Flies: Ecology, Population Management, and Annotated World List. The Penn. State Univ., University Park, PA. pp. 528.

Lacey, L.A., Undeen, A.H. 1987. The Biological Control Potentialof Pathogens and Parasites of Black Flies. In: Kim, K.C., Merritt, R.W. Black Flies: Ecology, Population Management, and Annotated World List. The Penn. State Univ., University Park, PA. pp. 327-340.

Molloy, D.P. 1987. The Ecology of Black Fly Parasites. In: Kim, K.C., Merritt, R.W. Black Flies: Ecology, Population Management, and Annotated World List. The Penn. State Univ., University Park, PA. pp. 315-326.

Moulton, J.K. 2000. Molecular sequence data resolves basal divergences within Simuliidae (Diptera). *Systematic Entomology* 25, 95-113.

Moulton, J.K. Adler, P.H. 1992. New Species of Black Fly in the *Simulium jenningsi* Group (Diptera: Simuliidae) from the Southeastern United States. Annals of the Entomological Society of America 85(4), July 1992, 393-399.

Moulton, J.K., Adler, P.H. 1995. Revision of the *Simulium jenningsi* species-group (Diptera: Simuliidae). Transactions of the American Entomological Society 121, 1-57.

Moulton, J.K., Wiegmann, B.M. 2004. Evolution and phylogenetic utility of CAD (rudimentary) among Mesozoic-aged eremoneuran Diptera (Insecta). *Molecular Phylogenetics and Evolution* 31: 363-378.

Pennsylvania Department of Environmental Protection (PDEP). 2012. http://www.portal.state.pa.us/portal/server.pt/community/black_fly/13774.

Ross, D.H, Merritt, R.W. 1987. Factors Affecting Larval Black Fly Distributions and Population Dynamics. In: Kim, K.C., Merritt, R.W. Black Flies: Ecology, Population Management, and Annotated World List. The Penn. State Univ., University Park, PA. pp. 90-108.

Stone, A., Snoddy, E.L. 1969. The black flies of Alabama (Diptera: Simuliidae). Auburn University Agricultural Experiment Station Bulletin 390, 1-93.

Townson, H., Post, R.J., Phillips, A. 1987. Biochemical Approaches to Black Fly Taxonomy. In: Kim, K.C., Merritt, R.W. Black Flies: Ecology, Population Management, and Annotated World List. The Penn. State Univ., University Park, PA. pp. 24-38.

Tucker. 1918. Occurrences of Black Flies in Louisiana during Recent Years. In: Transactions of the Kansas Academy of Science (1903-) 29, 65-75. U.S. Dept. of Agriculture. 1954. Losses in agriculture. A preliminary appraisal for review. USDA Agr. Res. Serv. ARS-20-1, Washington, D.C.

Wenk, P. 1987. Swarming and Mating Behavior of Black Flies. In: Kim, K.C., Merritt, R.W. Black Flies: Ecology, Population Management, and Annotated World List. The Penn. State. Univ., University Park, PA. pp. 215-227.

# APPENDIX

Appendix 1. Data matrix of speckle sequences generated during this study.

| Taxa | Sequence | Base # |
|---|---|---|
| tuberosum | AAAGAAGAAATACAAGTAGTTGAAAACATGGAGACGGTGGACAAGACTTG | [50] |
| verecundum | ---------- | [0] |
| decimatum | AAGGAAGAAATTCAGGTAGTTGAAGATATGGAGACGGTGGACAAGACCTG | [50] |
| apricarium | AAGGAAGAAATTCAAGTAGTTGAAGCTATGGAGACGGTGGACAAGACCTG | [50] |
| reptans | AAGGAAGAAATTCAGGTAGTTGAAGATATGGAGACGGTGGACAAGACCTG | [50] |
| anchist_AL_HC | AAAGAAGAAATTCAGGTAGTTGAAGATATKGACAAGGTGGACAAGACCTG | [50] |
| anchist_DE_DR | AAAGAAGAAATTCAGGTAGTTGAAGATATGGACAAGGTGGACAAGACCTG | [50] |
| anchist_ME_AR | AAAGAAGAAATTCAGGTAGTTGAAGATATGGACAAGGTGGACAAGACCTG | [50] |
| anchist_NC_NR | AAAGAAGAAATTCAGGTAGTTGAAGATATGGACAAGGTGGACAAGACCTG | [50] |
| anchist_ME_KR | AAAGAAGAAATTCAGGTAGTTGAAGATATGGACAAGGTGGACAAGACCTG | [50] |
| aranti_GA_FS | AAGGAAGAAATTCAGGTAGTTGARGATATGGAAAGGATGGACAAGACCTG | [50] |
| aranti_GA_AS | AAGGAAGAAATTCAGGTAGTTGARGATATGGAAAGGATGGACAAGACCTG | [50] |
| aranti_AL_HC | AAGGAAGAAATTCAGGTAGTTGARGATATGGAAAGGATGGACAAGACCTG | [50] |
| aranti_SC_LR | AAGGAAGAAATTCAGGTAGTTGARGATATGGAAAGGATGGACAAGACCTG | [50] |
| chlorum_NC_GC3 | AAGGAAGAAATTCAGGTAGTTGAAGATATGGAAAAGGTGGACAAGACCTG | [50] |
| chlorum_NC_GC1 | AAAGAAGAAATTCAGGTAGTTGAAGATATGGAAACGSTGGACAAGACCTG | [50] |
| chlorum_NC_GC4 | AAGGAAGAAATTCAGGTAGTTGAAGATATGGACAAGGTGRACAAGACYTG | [50] |
| confusum_TN_LR | AAGGAAGAAATTCAGGCAGTTGAAGATATGGACAAGGTGGACAAGACCTG | [50] |
| confusum_GA_GC | AAGGAAGAAATTCAGGCAGTTGAAGATATGGACAAGGTGGACAAGACCTG | [50] |
| confusum_GA_EC | AAGGAAGAAATTCAGGTAGYTGAAGATATGGAAAAGGTGGACAAGACCTG | [50] |
| confusum_TX_SJR | AAAGAAGAAATTCAGGTAGTTGAAGATATGGAAACCGTGGACAAGACCTG | [50] |
| confusum_TX_SR | AACGAAGAAAATCAGGTAATTGAAGATATGGAAACGGTGGACAAGACCTG | [50] |
| confusum_TX_Bayou | AAGGAAGAAATTCAGGTAGTTGAAGATATGGACAACGTGGACAAGACCTG | [50] |
| definitum_PA_LC | AAGGAAGAAATTCAGGTAGTTGAAGATATGGACAAGGTGGACAAGACTTG | [50] |
| definitum_SC_GC | AAGGAAGAATTTCAGGTAGTTGAAGATATGGACAAGGTGGACAAGACTTG | [50] |
| dixiense_GA_WC | AAAGAAGAAATTCAGGTYATTGAAGATATGGAAACCGTGGACAAGACCTG | [50] |
| dixiense_SC_LBC | AAAGAAGAAATTCAGGTCATTGAAGATATGGAAACMGTGGACAAGACCTG | [50] |
| dixiense_NC_QC | AAAGAAGAAATTCAGGTCATTGAAGATATGGAAACAGTGGACAAGACCTG | [50] |
| dixiense_FL_CC | AAAGAAGAAATTCAGGTCATTGAAGATATGGAAACAGTGGACAAGACCTG | [50] |
| fibrinflatum_PA_DR | AAGGAAGAAATTCAGGTAGTTGAAGATATGGACAAGGTGGACAAGACCTG | [50] |
| fibrinflatum_ME_AR | AAGGAAGAAATTCAGGTAGTTGAAGATATGGACAAGGTGGACAAGACCTG | [50] |
| fibrinflatum_GA_FR | AAGGAAGAAATTCAGGTAGTTGAAGATATGGACAAGGTGGACAAGACCTG | [50] |
| haysi_AL_BCC3 | AAGGAAGAAATTCAGGTAGTTGAAGATATGGAAACGGTGGACAAGACCTG | [50] |
| haysi_TX_SJR | AAGGAAGAAATTCAGGTAGTTGAAGATATGGAAACGGTGGACAAGACCTG | [50] |
| infenestrum_NC_RR | AAGGAAGAAATTCAGGTACTTGAGGATATGGACAAGGTGGACAAGACCTG | [50] |
| infenestrum_SC_RBC | AAGGAAGAAATTCAGGTACTTGAGGATATGGACAAGGCGGACAAGACCTG | [50] |
| jenningsi_TN_PR | AAGGAAGAAATTCAGGTAGTTGAAGATCTGGACAAGGTGGACAAGACCTG | [50] |
| jenningsi_NC_ER | AAGGAAGAAATTCAGGTAGTTGAAGATATGGACACCGTGGACAAGACTTG | [50] |
| jenningsi_SC_FC | AAGGAAGAAATTCAAGTAGTTGAAGATATGGACACCGTGGACAAGACCTG | [50] |
| jenningsi_PA_BR | AAGGATGAAATTCAGGTAGTTGAAGATATGGAAACCGTGGACAAGACCTG | [50] |
| jenningsi_GA_AR | AAGGAAGAAATTCAGGTAGTTGAAGATATGGAAACCGTGGACAAGACCTG | [50] |
| jonesi_FL_CC1 | AACGAAGAAATTCAGGCAGTTGAAGATATGGACAAGGTGGACAAGACCTG | [50] |
| jonesi_AL_BCC | AAGGAAGAAATTCAGGTAGTTGAAGATATGGACAAGGTGGACAAGACCTG | [50] |
| jonesi_NC_CC | AAGGAAGAAATTCAGGTAGTTGAAGATATGGACAAGGTGGACAAGACCTG | [50] |
| jonesi_NC_QC | AAGGAAGAAATTCAGGTAGTTGAAGATATGGACAAGGTGGACAAGACCTG | [50] |
| jonesi_GA_WC | AAGGAAGAAATTCAGGTAGTTGAAGATATGGACAAGGTGGACAAGACCTG | [50] |
| krebsorum_NC_MC | AAGGAAGAAATTCAGGCAGTTGAAGATATGGAAACGCTGGACAAGACCTG | [50] |
| krebsorum_SC_CC2 | AAGGAAGAAATTCAGGCAGTTGAAGATATGGAAACGCTGGACAAGACCTG | [50] |
| lakei_PA_NC | AAGGAAGAAATTCAGGCAGTTGAAGATATGGACAAGGTGGACAAGACCTG | [50] |
| lakei_SC_BR | AAGGAAGAAATTCAGGTAGTTGAAGATATGGACARGGTGGACAAGACTTG | [50] |
| lakei_FL_CR | AAGGAAGAAATTCAGGTAGTTGAAGATATGGACAAGGTGGACAAGACTTG | [50] |
| lakei_Taunt_8_MA_TR | AAGGAAGAAATTCAGGCAGTTGAAGATATGGACAAGGTGGACAAGACCTG | [50] |
| lakei_Taunt_9_MA_TR | AAAGAAGAAATTCAGGTAGTTGAAGATATGGAAACGGTGGACAAGACCTG | [50] |
| luggeri_NWT | AAGGAAGAAATTCAGGTAGTTGAAGATATGGAAACCGTGGACAAGACCTG | [50] |
| luggeri_NE_FR | AAGGAAGAAATTCAGGTAGTTGAAGATATGGAAACCGTGGACAAGACCTG | [50] |
| luggeri_NC_HR | AAGGAAGAAATTCAGGTAGTTGAAGATATGGAAATCGTGGACAAGACCTG | [50] |
| luggeri_KY_GR3 | AAGGAAGAAATTCAGGTAGTTGAAGATATGGAAATCGTGGACAAGACCTG | [50] |
| 'notiale AL BC5+6' | AAGGAAGAAATTCAGGTAGTTGAAGATATGGACAAGGTGGACAAGACCTG | [50] |
| notiale_VA_RR | AAGGAAGAAATTCAGGTAGTTGAAGATATGGACAAGGTGGACAAGACCTG | [50] |
| notiale_TN_CC | AAGGAAGAAATTCAGGTAGTTGAAGATATGGACAAGGTGGACAAGACCTG | [50] |
| notiale_SC_RBC | AAAGAAGAAATTCARGTAGTTGAAGATATGGACAAGGTGGACAAGATCTG | [50] |

Appendix 1. (Cont.)

| Taxa | Sequence | Base # |
|---|---|---|

| | | |
|---|---|---|
| 'notiale AL BC6+6' | AAGGAAGAAATTCAGGTAGTTGAAGATATGGACAAGGTGGACAAGACCTG | [50] |
| nyssa_AL_BC | AAAGAAGAAATTCAGGTAGTTGAAGATATGGACAAGGTGGACAAGACCTG | [50] |
| nyssa_ME_AR | AAAGAAGAAATTCAGGTACTTGAAGATATGGACAAGGTGGACAAGACCTG | [50] |
| nyssa_VA_RR | AAAGAAGAAATTCAGGTAGTTGAAGATATGGACAAAGTGGACAAGACCTG | [50] |
| nyssa_ME_PR | AAAGAAGAAATTCAGGTAGTTGAAGATATGGACAAGGTGGACAAGACCTG | [50] |
| nyssa_NC_TR | AAAGAAGAAATTCAGGTAGTTGAAGATATGGACAAGGTGGACAAGACCTG | [50] |
| ozarkense_MO_GR2 | AAGGAAGAAATTCAGGTAGTTGAAGATATGGACAAGGTGGACAAGACCTG | [50] |
| ozarkense_MO_GR1 | AAGGAAGAAATTCAGGTAGTTGAAGATATGGACACCGTGGACAAGACCTG | [50] |
| penobsco_ME_PR1 | AAGGAAGAAATTCAGGTACTTGAGGATATGGACAAGGTGGACAAGACCTG | [50] |
| penobsco_ME_PR2 | AAGGAAGAAATTCAGGTACTTGAGGATATGGACAAGGTGGACAAGACCTG | [50] |
| podostemi_NC_TR | AAAGAAGAAATTCAGGTAGTTGAAGATATGGACAAGGTGGACAAGACCTG | [50] |
| podostemi_GA_AS | AAAGAAGAAATTCAGGTAGTTGAAGATATGGACAAGGTGGACAAGACCTG | [50] |
| podostemi_MS_BC | AAAGAAGAAATTCAGGTAGTTGAAGATATGGACAAGGTGGACAAGACCTG | [50] |
| podostemi_GA_CR | AAAGAAGAAATTCAGGTAGTTGAAGATATGGACAAGGTGGACAAGACCTG | [50] |
| remissum_NC_NR2 | AAGGAAGAAATTCAGGTACTTGAAGATATGGATAAGGTGGACAAGACCTG | [50] |
| remissum_NC_NR1 | AAGGAAGAAATTCAGGTACTTGAAGATATGGATAAGGTGGACAAGACCTG | [50] |
| remissum_NC_NR3 | AAGGAAGAAATTCAAGTACTTGAAGATATGGATAAGGTGGACAAGACCTG | [50] |
| 'snowi AL BC 4+6' | AAGGAAGAAATTCAGGTAGTTGAAGATATGGACAAGGTGGACAAGACCTG | [50] |
| snowi_TN_CC | AAGGAAGAAATTCAGGTAGTTGAAGATATGGACAAGGTGGACAAGACCTG | [50] |
| 'snowi AL BC 4+4' | AAGGAAGAAATCCAGGTAGTTGAAGATATGGACAAGGTGGACAAGACCTG | [50] |
| taxodium_GA_CC2 | AARGAAGAAATTCAGGCAGTTGAAGATATGGACAAGGTGGACAAGACCTG | [50] |
| taxodium_FL_CR | AAGGAAGAAATTCAGGTAGTTGAAGATATGGACAAGGTGGACAAGACCTG | [50] |
| underhilli_AL_HC3 | AAGGAAGAAATTCAGGTAGTTGAAGATATGGACAAGGTGGACAAGACCTG | [50] |
| underhilli_GA_FR | AAGGAAGAAATTCAGGTAGTTGAAGATATGGACAAGGTGGACAAAACCTG | [50] |
| underhilli_GA_FS | AAGGAAGAAATTCAGGTAGTTGAAGATATGGACAAGGTGGACAAGACCTG | [50] |

| | | |
|---|---|---|
| tuberosum | TACAATCACTTGGCGAGGTGACGGTGAATATTTTGCGGTCAGCTTTGTCC | [100] |
| verecundum | ---------- | [0] |
| decimatum | CTCAATAACTTGGCGAGGCGACGGTGAATATTTCGCGGTCAGCTTTGTGC | [100] |
| apricarium | CTCAATAACTTGGCGAGGGGACGGTGAATATTTTGCGGTCAGCTTTGTGC | [100] |
| reptans | CTCAATAACTTGGCGAGGTGACGGTGAATATTTTGCGGTCAGCTTTGTGC | [100] |
| anchist_AL_HC | TTCAATAACTTGGCGAGGTGACGGTGAATATTTTGCAGTCAGCTTTGTGC | [100] |
| anchist_DE_DR | TTCAATAACTTGGCGAGGTGACGGTGAATATTTTGCRGTYAGCTTTGTGC | [100] |
| anchist_ME_AR | TTCAATAACTTGGCGAGGTGACGGTGAATATTTTGCAGTCAGCTTTGTGC | [100] |
| anchist_NC_NR | TTCAATAACTTGGCGAGGTGACGGTGAATATTTTGCAGTCAGCTTTGTGC | [100] |
| anchist_ME_KR | TTCAATAACTTGGCGAGGTGACGGTGAATATTTTGCAGTTAGCTTTGTGC | [100] |
| aranti_GA_FS | TTCAATAACTTGGCGAGGTGACGGTGAATATTTTGCGGTCAGCTTTGTGC | [100] |
| aranti_GA_AS | TTCAATAACTTGGCGAGGTGACGGTGAATATTTTGCGGTCAGCTTTGTGC | [100] |
| aranti_AL_HC | TTCAATAACTTGGCGAGGTGACGGTGAATATTTTGCGGTCAGCTTTGTGC | [100] |
| aranti_SC_LR | TTCAATAACTTGGCGAGGTGACGGTGAATATTTTGCGGTCAGCTTTGTGC | [100] |
| chlorum_NC_GC3 | TTCAATAACTTGGCGAGGTGACGGTGAATATTTTGCGGTCAGCTTTGTGC | [100] |
| chlorum_NC_GC1 | TTCAATAACTTGGCGAGGTGACGGTGAATATTTTGCGGTCAGCTTTGTGC | [100] |
| chlorum_NC_GC4 | TTCAATAACCTGGCGAGGTGACGGTGAATATTTTGCGGTCAGCTTTGTRC | [100] |
| confusum_TN_LR | TTCAATAACTTGGCGAGGTGACGGTGAATATTTTGCGGTCAGYTTTGTGC | [100] |
| confusum_GA_GC | TTCAATAACTTGGCGAGGTGACGGTGAATATTTTGCGGTCAGTTTTGTGC | [100] |
| confusum_GA_EC | TTCAATAACTTGGCGAGGTGACGGTGAATATTTTGCGGTCAGTTTTGTGC | [100] |
| confusum_TX_SJR | TTCAATAACTTGGCGCGGTGACGGTGAATATTTTGCGGTCAGCTTTGTGC | [100] |
| confusum_TX_SR | TTCAATAACTTGGCGAGGTGACGGTGAATATTTTGCGGTCAGCTTTGTGC | [100] |
| confusum_TX_Bayou | TTCAATAACTTGGCGAGGTGACGGTGAATATTTTGCGGTCAGCTTTGTGC | [100] |
| definitum_PA_LC | TTCAATAACTTGGCGAGGTGACGGTGAATATTTTGCGGTCAGCTTTGTGC | [100] |
| definitum_SC_GC | TTCAATAACTTGGCGAGGTGACGGTGAATATTTTGCGGTCAGCTTTGTGC | [100] |
| dixiense_GA_WC | TTCAGTAACTTGGCGTGGTGACGGTGAATATTTCGCGGTCAGCTTTGTGC | [100] |
| dixiense_SC_LBC | TTCAGTAACTTGGCGTGGTGACGGTGAATATTTCGCGGTCAGCTTTGTGC | [100] |
| dixiense_NC_QC | TTCAGTAACTTGGCGTGGTGACGGTGAATATTTCGCGGTCAGCTTTGTGC | [100] |
| dixiense_FL_CC | TTCAGTAACTTGGCGTGGTGACGGTGAATATTTCGCGGTCAGCTTTGTGC | [100] |
| fibrinflatum_PA_DR | TTCCATAACTTGGCGAGGTGACGGTGAATATTTTGCGGTCAGCTTTGTCC | [100] |
| fibrinflatum_ME_AR | TTCAATAACTTGGCGAGGTGACGGTGAATATTTTGCGGTCAGCTTTGTGC | [100] |
| fibrinflatum_GA_FR | TTCCATAACTTGGCGAGGTGACGGTGAATATTTTGCGGTCAGCTTTGTCC | [100] |
| haysi_AL_BCC3 | TTCAATAACTTGGCGAGGTGACGGTGAATATTTTGCGGTCAGCTTTGTGC | [100] |
| haysi_TX_SJR | TTCAATAACTTGGCGAGGTGACGGTGAATATTTTGCGGTCAGCTTTGTGC | [100] |

Appendix 1. (Cont.)

| Taxa | Sequence | Base # |
|---|---|---|
| infenestrum_NC_RR | TTCCATAACTTGGCGAGGTGACGGTGAATATTTTGCGGTCAGCTTTGTGC | [100] |
| infenestrum_SC_RBC | TTCTATAACTTGGCGAGGTGACGGTGAATATTTTGCGGTCAGCTTTGTGC | [100] |
| jenningsi_TN_PR | TTCAATAACTTGGCGAGGTGACGGTGAATACTTTGCGGTCAGCTTTGTGC | [100] |

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jenningsi_NC_ER          TTCAATAACTTGGCGAGGTGACGGTGAATACTTTGCGGTCAGCTTTGTGC   [100]
jenningsi_SC_FC          TTCAATAACTTGGCGAGGTGACGGTGAATACTTTGCGGTCAGCTTTGTGC   [100]
jenningsi_PA_BR          TTCAATAACTTGGCGTGGTGACGGTGAATACTTTGCGGTCAGCTTTGTGC   [100]
jenningsi_GA_AR          TTCAATAACTTGGCGAGGTGACGGTGAATACTTTGCGGTCAGCTTTGTGC   [100]
jonesi_FL_CC1            TTCAATAACTTGGCGAGGTGACGGTGAATATTTTGCGGTCAGCTTTGTAC   [100]
jonesi_AL_BCC            TTCAATAACATGGCGAGGTGACGGTGAATATTTTGCGGTCAGCTTTGTGC   [100]
jonesi_NC_CC             TTCAATAACATGGCGAGGTGACGGTGAATATTTTGCGGTCAGCTTTGTGC   [100]
jonesi_NC_QC             TTCAATAACATGGCGAGGTGACGGTGAATATTTTGCGGTCAGCTTTGTGC   [100]
jonesi_GA_WC             TTCAATAACATGGCGAGGTGACGGTGAATATTTTGCGGTCAGCTTTGTGC   [100]
krebsorum_NC_MC          CTCAATAACTTGGCGAGGTGACGGTGAATATTTTGCGGTCAGCTTTGTGC   [100]
krebsorum_SC_CC2         CTCAATAACTTGGCGAGGTGACGGTGAATATTTTGCGGTCAGCTTTGTGC   [100]
lakei_PA_NC              TTCAATWACTTGGCGAGGTGACGGTGAATATTTTGCGGTCAGTTTTGTGC   [100]
lakei_SC_BR              TTCAATAACTTGGCGAGGTGACRGTGAATATTTTGCGGTCAGTTTTGTGC   [100]
lakei_FL_CR              YTCAATAACATGGCGAGGTGACGGTGAATATTTTGCGGTCAGCTTTGTGC   [100]
lakei_Taunt_8_MA_TR      TTCAATTACTTGGCGAGGTGACGGTGAATATTTTGCGGTCAGCTTTGTGC   [100]
lakei_Taunt_9_MA_TR      TTCAATAACTTGGCGAGGTGACGGTGAATATTTTGCGGTCAGTTTTGTGC   [100]
luggeri_NWT              TTCAATAACTTGGCGAGGTGACGGTGAATATTTTGCGGTCAGCTTTGTGC   [100]
luggeri_NE_FR            TTCAATAACTTGGCGAGGTGACGGTGAATATTTTGCGGTCAGCTTTGTGC   [100]
luggeri_NC_HR            TTCAATAACTTGGCGAGGTGAMGGTGAATATTTTGCGGTCAGCTTTGTGC   [100]
luggeri_KY_GR3           TTCAATAACTTGGCGAGGTGACGGTGAATATTTTGCGGTCAGCTTTGTGC   [100]
'notiale AL BC5+6'       TTCAATAACTTGGCGAGGTGACGGTGAATATTTTGCGGTCAGCTTTGTCC   [100]
notiale_VA_RR            TTCAATAACTTGGCGAGGTGACGGTGAATATTTTGCGGTCAGCTTTGTCC   [100]
notiale_TN_CC            TTCAATAACTTGGCGAGGTGACGGTGAATATTTTGCGGTCAGCTTTGTCC   [100]
notiale_SC_RBC           TTCAATAACTTGGCGAGGTGACGGTGAATATTTTGCGGTCAGCTTTGTCC   [100]
'notiale AL BC6+6'       TTCAATAACTTGGCGAGGTGACGGTGAATATTTTGCGGTCAGCTTTGTCC   [100]
nyssa_AL_BC              TTCAATAACTTGGCGAGGTGACGGTGAATATTTTGCAGTCAGCTTTGTGC   [100]
nyssa_ME_AR              TTCAATAACTTGGCGAGGTGACGGTGAATATTTTGCAGTCAGCTTTGTGC   [100]
nyssa_VA_RR              TTCAATAACTTGGCGAGGTGATGGTGAATATTTTGCAGTCAGTTTTGTGC   [100]
nyssa_ME_PR              TTCAATAACTTGGCGAGGTGACGGTGAATATTTTGCRGTCAGCTTTGTGC   [100]
nyssa_NC_TR              TTCAATAACTTGGCGAGGTGACGGTGAATATTTTGCAGTCAGCTTTGTGC   [100]
ozarkense_MO_GR2         TTCAATAACTTGGCGAGGTGACGGTGAATATTTTGCGGTCAGCTTTGTGC   [100]
ozarkense_MO_GR1         TTCAATAACTTGGCGAGGTGACGGTGAATATTTTGCAGTCAGCTTTGTGC   [100]
penobsco_ME_PR1          TTCTATAACTTGGCGAGGTGACGGTGAATATTTTGCGGTCAGCTTTGTGC   [100]
penobsco_ME_PR2          TTCTATAACTTGGCGAGGTGACGGTGAATATTTTGCGGTCAGCTTTGTGC   [100]
podostemi_NC_TR          TTCCATAACTTGGCGAGGTGACGGTGAATATTTTGCGGTCAGCTTTGTGC   [100]
podostemi_GA_AS          TTCCATAACTTGGCGAGGTGACGGTGAATATTTTGCGGTCAGCTTTGTAC   [100]
podostemi_MS_BC          TTCCATAACTTGGCGAGGTGACGGTGAATATTTTGCGGTCAGCTTTGTRC   [100]
podostemi_GA_CR          TTCCATAACTTGGCGAGGTGACGGTGAATATTTTGCGGTCAGCTTTGTRC   [100]
remissum_NC_NR2          TTCAATAACTTGGCGAGGTGACGGTGAATATTTTGCGGTCAGCTTTGTGC   [100]
remissum_NC_NR1          TTCAATAACTTGGCGAGGTGACGGTGAATATTTTGCGGTCAGCTTTGTGC   [100]
remissum_NC_NR3          TTCAATAACTTGGCGAGGTGACGGTGAATATTTTGCGGTCAGCTTTGTGC   [100]
'snowi AL BC 4+6'        TTCAATAACTTGGCGAGGTGACGGTGAATATTTTGCGGTCAGCTTTGTCC   [100]
snowi_TN_CC              TTCAATAACTTGGCGAGGTGACGGTGAATATTTTGCGGTCAGCTTTGTCC   [100]
'snowi AL BC 4+4'        TTCCATAACTTGGAGAGGTGACGGTGAATATTTTGCGGTCAGCTTTGTCC   [100]
taxodium_GA_CC2          TTCAATAACTTGGCGAGGTGACGGTGAATATTTTGCGGTCAGTTTTGTGC   [100]
taxodium_FL_CR           YTCAATAACTTGGCGAGGTGACGGTGAATATTTTGCGGTCAGCTTTGTGC   [100]
underhilli_AL_HC3        TTCAATAACTTGGCGAGGTGACGGTGAATATTTTGCGGTCAGCTTTGTCC   [100]
underhilli_GA_FR         TTCAATAACTTGGCGAGGCGACGGTGAATATTTTGCGGTCAGCTTTGTCC   [100]
underhilli_GA_FS         TTCMATAACTTGGCGAGGYGACGGTGAATATTTTGCGGTCAGCTTTGTCC   [100]


tuberosum                AAAACAGCGAGCGAGGTCGCATGTTTAAGGTGTTCAACAAGGAAGGACAC   [150]
verecundum               --------------------------------------------------   [0]
decimatum                AAAACAGCGAGCGGGGTCGCATGTTTAAAGTGTTCAACAAGGAAGGACAT   [150]
apricarium               AAAACAGCGAACGAGGCCGCATGTTTAAAGTTTTCAACAAGGAAGGACAT   [150]
reptans                  AGACCAGCGAGCGTGGTCGCATGTTTAAAGTGTTCAACAAGGAAGGACAT   [150]
anchist_AL_HC            AAAACAACGAGCGTGGTCGYATGTTTAAAGTGTTCAACAAGGAAGGGCAT   [150]
anchist_DE_DR            AAAACAACGAGCGTGGTCGCATGTTTAAAGTGTTCAACAAGGAAGGGCAT   [150]
```

Appendix 1. (Cont.)

| Taxa | Sequence | Base # |
|---|---|---|
| anchist_ME_AR | AAAACARCGAGCGTGGTCGCATGTTTAAAGTGTTCAACAAGGAAGGGCAT | [150] |
| anchist_NC_NR | AAAACAACGAGCGTGGTCGCATGTTTAAAGTGTTCAACAAGGAAGGGCAT | [150] |
| anchist_ME_KR | AAAACAACGAGCGTGGTCGCATGTTTAAAGTGTTCAACAAGGAAGGGCAT | [150] |
| aranti_GA_FS | AAAACAGCGARCGTGGTCGCATGTTTAAAGTGTTCAACAAGGAAGGGCAT | [150] |
| aranti_GA_AS | AAAACAGCGARCGTGGTCGCATGTTTAAAGTGTTCAACAAGGAAGGGCAT | [150] |
| aranti_AL_HC | AAAACAGCGARCGTGGYCGCATGTTTAAAGTGTTCAACAAGGAAGGGCAT | [150] |

| | | |
|---|---|---|
| aranti_SC_LR | AAAACAGCGAACGTGGCCGCATGTTTAAAGTGTTCAACAAGGAAGGGCAT | [150] |
| chlorum_NC_GC3 | AAAACAGCGAGCGTGGCCGCATGTTTAAAGTGTTCAACAAGGAAGGGCAT | [150] |
| chlorum_NC_GC1 | AAAACAGCGAGCGCGGCCGCATGTTTAAAGTGTTCAACAAGGAAGGGCAT | [150] |
| chlorum_NC_GC4 | AAAACAGCGAACGTGGCCGCATGTTTAAAGTSTTCAACAAGGAAGGGCAT | [150] |
| confusum_TN_LR | AAAACAGCGAGCGTGGSCGCATGTTTAAAGTSTTCAACAAGGAAGGGCAT | [150] |
| confusum_GA_GC | AAAACAGCGAGCGTGGCCGCATGTTTAAAGTGTTCAACAAGGAAGGGCAT | [150] |
| confusum_GA_EC | AAAACAGCGAGCGCGGCCGCATGTTTAAAGTGTTCAACAAGGAAGGGCAT | [150] |
| confusum_TX_SJR | AAAACAGCGAACGTGGCCGCATGTTTAAAGTGTTCAACAAGGAAGGGCAT | [150] |
| confusum_TX_SR | AAAACAGCGAGCGTGGCCGCATGTTTAAAGTGTTCAACAAGGAAGGGCAT | [150] |
| confusum_TX_Bayou | AAAACAGCGAGCGTGGCCGCATGTTTAAAGTGTTCAACAAGGAAGGGCAT | [150] |
| definitum_PA_LC | AAACYAGCGAGCGTGGCCGCATGTTTAAAGTATTCAACAAGGAAGGGCAT | [150] |
| definitum_SC_GC | AAACCAGCGAGCGTGGCCGCATGTTTAAAGTATTCAACAAGGAAGGGCAT | [150] |
| dixiense_GA_WC | AAACCAGCGAGCGTGGCCGCATGTTTAAAGTGTTCAACAAGGAAGGGCAT | [150] |
| dixiense_SC_LBC | AAACCAGCSAGCGTGGCCGCATGTTTAAAGTGTTCAACAAGGAAGGGCAT | [150] |
| dixiense_NC_QC | AAACCAGCCAGCGTGGCCGCATGTTTAAAGTGTTCAACAAGGAAGGGCAT | [150] |
| dixiense_FL_CC | AAACCAGCCAGCGTGGCCGCATGTTTAAAGTGTTCAACAAGGAAGGGCAT | [150] |
| fibrinflatum_PA_DR | AAAACAGCGAGCGTGGCCGCATGTTTAAAGTGTTCAACAAGGAAGGGCAT | [150] |
| fibrinflatum_ME_AR | AAACCAGCGAKCGCGGTCGYATGTTYAAAGTGTTCAACAAGGAAGGACAT | [150] |
| fibrinflatum_GA_FR | AAAACAGCGAGCGTGGCCGCATGTTTAAAGTGTTCAACAAGGAAGGGCAT | [150] |
| haysi_AL_BCC3 | AAAACAGCGAGCGTGGCCGCATGTTTAAAGTGTTCAACAAGGAAGGGCAT | [150] |
| haysi_TX_SJR | AAAACAGCGAGCGTGGCCGCATGTTTAAAGTGTTCAACAAGGAAGGGCAT | [150] |
| infenestrum_NC_RR | AAAMCAGCGARCGCGGYCGCATGTTTAAAGTGTTCAACAAGGAAGGACAT | [150] |
| infenestrum_SC_RBC | AAAACAGCGARCGCGGTCGCATGTTTAAAGTGTTCAACAAGGAAGGACAT | [150] |
| jenningsi_TN_PR | AAACCAGCGAGCGTGGCCGCATGTTTAAAGTGTTCAACAAGGAAGGGCAT | [150] |
| jenningsi_NC_ER | AAACCAGCGAGCGTGGCCGCATGTTTAAAGTGTTCAACAAGGAAGGGCAT | [150] |
| jenningsi_SC_FC | GAACCAGAGAGCGTGGCCGCATGTTTAAAGTGTTCAACAAGGAAGGGCAT | [150] |
| jenningsi_PA_BR | AAAACAGCGAGCGTGGTCGCATGTTTAAAGTGTTCAACAAGGAAGGGCAT | [150] |
| jenningsi_GA_AR | AAACCAGCGAGCGTGGCCGCATGTTTAAAGTGTTCAACAAGGAAGGGCAT | [150] |
| jonesi_FL_CC1 | AAAATAGTGAACGTGGCCGTATGTTTAAAGTGTTCAACAAGGAGGGCCAT | [150] |
| jonesi_AL_BCC | AAAAYAGCGAGCGTGGYCGCATGTTTAAAGTGTTCAACAAGGAAGGGCAT | [150] |
| jonesi_NC_CC | AAAATAGCGAGCGTGGTCGCATGTTTAAAGTGTTCAACAAGGAAGGGCAT | [150] |
| jonesi_NC_QC | AAAATAGCGAGCGTGGTCGCATGTTTAAAGTGTTCAACAAGGAAGGGCAT | [150] |
| jonesi_GA_WC | AAAATAGCGAGCGTGGTCGCATGTTTAAAGTATTCAACAAGGAAGGGCAT | [150] |
| krebsorum_NC_MC | AAAACAGCGAGCGTGGTCGCATGTTTAAAGTTTTCAACAAGGAAGGGCAT | [150] |
| krebsorum_SC_CC2 | AAAACAGCGAGCGTGGTCGCATGTTTAAAGTTTTCAACAAGGAAGGGCAT | [150] |
| lakei_PA_NC | AAAACAGCGAGCGTGGCCGCATGTTTAAAGTGTTCAACAAGGAAGGGCAT | [150] |
| lakei_SC_BR | AAAACAGCGAGCGWGGCCGCATGTTTAAAGTGTTCAACAAGGAAGGGCAY | [150] |
| lakei_FL_CR | AAAACAGCGAGCGTGGTCGTATGTTTAAAGTCTTCAACAAGGAAGGGCAT | [150] |
| lakei_Taunt_8_MA_TR | AAAACAGCGAGCGTGGCCGCATGTTTAAAGTGTTCAACAAGGAAGGGCAT | [150] |
| lakei_Taunt_9_MA_TR | AAAACAGCGAGCGCGGCCGCATGTTTAAAGTGTTCAACAAGGAAGGGCAT | [150] |
| luggeri_NWT | AAAAYAGCGAGCGTGGCCGCATGTTTAAAGTGTTCAACAAGGAAGGGCAT | [150] |
| luggeri_NE_FR | AAAACARYGAGCGTGGCCGCATGTTTAAAGTGTTCAACAAGGAAGGACAT | [150] |
| luggeri_NC_HR | AAAAYAGYGAGCGTGGCCGCATGTTTAAAGTGTTCAACAAGGAAGGACAT | [150] |
| luggeri_KY_GR3 | AAAACAGTGAGCGTGGCCGCATGTTTAAAGTGTTCAACAAGGAAGGACAT | [150] |
| 'notiale AL BC5+6' | AAAACAGCGAGCGGGGTCGTATGTTCAAAGTGTTCAACAAGAAAGGGCAT | [150] |
| notiale_VA_RR | AAAACAGCGAGCGGGGTCGTATGTTCAAAGTGTTCAACAAGGAAGGGCAT | [150] |
| notiale_TN_CC | AAAACAGCGAGCGTGGTCGTATGTTCAAAGTGTTCAACAAGGAAGGGCAT | [150] |
| notiale_SC_RBC | AAAACAGCGAGCGTGGCCGCATGTTYAAAGTGTTCAACAAGGAAGGGCAT | [150] |
| 'notiale AL BC6+6' | AAAACAGCGAGCGGGGTCGTATGTTCAAAGTGTTCAACAAGGAAGGGCAT | [150] |
| nyssa_AL_BC | AAAACAACGAGCGTGGTCGCATGTTTAAAGTGTTCAACAAGGAAGGGCAT | [150] |
| nyssa_ME_AR | AAAACAACGAGCGTGGTCGCATGTTTAAAGTGTTCAACAAGGAAGGGCAT | [150] |
| nyssa_VA_RR | AAAACAACGAGCGTGGTCGCATGTTTAAAGTGTTCAACAAGGAAGGGTAT | [150] |
| nyssa_ME_PR | AAAACAGCGAGCGTGGTCGCATGTTTAAAGTGTTCAACAAGGAAGGGCAT | [150] |
| nyssa_NC_TR | AAAACAMCGAGCGTGGTCGCATGTTTAAAGTGTTCAACAAGGAAGGGCAT | [150] |
| ozarkense_MO_GR2 | AAAACAGCGAGCGTGGCCGCATGTTTAAAGTGTTCAACAAGGAAGGGCAT | [150] |
| ozarkense_MO_GR1 | AAAACAGAGAGCGTGGCCGCATGTTTAAAGTGTTCAACAAGGAAGGGCAT | [150] |

Appendix 1. (Cont.)

| Taxa | Sequence | Base # |
|---|---|---|
| penobsco_ME_PR1 | AAAACAGCGAACGCGGTCGCATGTTTAAAGTGTTCAACAAGGAAGGACAT | [150] |
| penobsco_ME_PR2 | AAAACAGCGAACGCGGTCGCATGTTTAAAGTGTTCAACAAGGAAGGACAT | [150] |
| podostemi_NC_TR | AAAACAGCGAACGTGGCCGCATGTTTAAAGTGTTCAACAAGGAAGGACAT | [150] |
| podostemi_GA_AS | AAAACAGCGAACGTGGCCGCATGTTTAAAGTGTTCAACAAGGAAGGACAT | [150] |
| podostemi_MS_BC | AAAACAGCGAACGTGGCCGCATGTTTAAAGTGTTCAACAAGGAAGGACAT | [150] |
| podostemi_GA_CR | AAAACAGCGAACGTGGCCGCATGTTTAAAGTGTTCAACAAGGAAGGACAT | [150] |
| remissum_NC_NR2 | AAAACAGCGAGCGTGGTCGCATGTTTAAAGTGTTCAACAAGGAAGGGCAT | [150] |
| remissum_NC_NR1 | AAAACAGCGAGCGTGGTCGCATGTTTAAAGTGTTCAACAAGGAAGGGCAT | [150] |
| remissum_NC_NR3 | AAAACAGCGAGCGTGGTCGCATGTTTAAAGTGTTCAACAAGGAAGGGCAT | [150] |

| | | |
|---|---|---|
| 'snowi AL BC 4+6' | AAAACAGCGAGCGGGGTCGTATGTTCAAAGTGTTCAACAAGGAAGGGCAT | [150] |
| snowi_TN_CC | AAAACAGCGAGCGGGGTCGTATGTTCAAAGTGTTCAACAAGGAAGGGCAT | [150] |
| 'snowi AL BC 4+4' | AAAACAGCGAGCGTGGYCGCATGTTTAAAGTGTTCAACAAGGAAGGGCAT | [150] |
| taxodium_GA_CC2 | AAAACAGCGAGCGTGGCCGCATGTTTAAAGTGTTCAACAAGGAAGGGCAT | [150] |
| taxodium_FL_CR | AAAACAGCGAGCGTGGTCGTATGTTTAAAGTGTTCAACAAGGAAGGGCAT | [150] |
| underhilli_AL_HC3 | AAAACAGCGAGCGTGGCCGCATGTTYAAAGTGTTCARCAAGGAAGGGCAT | [150] |
| underhilli_GA_FR | AAAACAGCGAGCGTGGTCGCATGTTCAAAGTGTTCAACAAGGAAGGGCAT | [150] |
| underhilli_GA_FS | AAAACAGCGAGCGYGGCCGCATGTTTAAAGTGTTCAACAAGGAAGGRCAT | [150] |

| | | |
|---|---|---|
| tuberosum | TTGCAGTTCACTTCGGAGCCTTGTGGTGGCTTGGAGCCACCGATATTCTG | [200] |
| verecundum | ----------CGGAACCTTGTGGTGGTTTGGAACCACCGATATTTTG | [37] |
| decimatum | TTGCAGTTTACCTCGGAGCCTTGTGGCGGTTTAGAGTCCCCGATATTTTG | [200] |
| apricarium | TTGCAGTTTACATCGGAGCCTTGTGGCGGTTTAGAGTCCCCGATATTTTG | [200] |
| reptans | TTGCAGTTTACCTCGGAGCCTTGTGGTGGTTTGGAGCCCCCGATATTTTG | [200] |
| anchist_AL_HC | TTGCAGTTCACCTCCGAACCTTGTGGCGGCCTAGAACCTCCGATATTCTG | [200] |
| anchist_DE_DR | TTGCAGTTCACCTCCGAACCTTGTGGCGGCCTAGAACCTCCGATATTCTG | [200] |
| anchist_ME_AR | TTGCAGTTCACCTCCGAACCTTGTGGCGGCCTAGAACCTCCGATATTCTG | [200] |
| anchist_NC_NR | TTGCAGTTCACCTCSGAACCTTGTGGCGGCCTAGAACCTCCGATATTCTG | [200] |
| anchist_ME_KR | TTGCAGTTTACCTCCGAACCTTGTGGCGGCCTAGAACCACCGATATTCTG | [200] |
| aranti_GA_FS | TTGCAGTTCACCTCGGAGCCTTGTGGCGGCCTCGAGTCTCCGATATTCTG | [200] |
| aranti_GA_AS | TTGCAGTTCACCTCGGAGCCTTGTGGCGGCCTCGAGTCTCCGATATTCTG | [200] |
| aranti_AL_HC | TTRCAGTTCACCTCGGAGCCTTGTGGCGGCCTCGAGTCTCCGATATTCTG | [200] |
| aranti_SC_LR | TTGCAGTTCACCTCGGAGCCTTGTGGCGGCCTCGAGTCTCCGATATTCTG | [200] |
| chlorum_NC_GC3 | TTGCAGTTCACCTCGGAGCCTTGTGGTGGCCTAGAGCCTCCGATATTCTG | [200] |
| chlorum_NC_GC1 | TTGCAGTTCACCTCGGAACCTTGTGGCGGCCTAGAGCCTCCGATATTCTG | [200] |
| chlorum_NC_GC4 | TTGCAGTTCACCTCGGAGCCTTCTGGCGGYTTAGAGCCTCCGATATTCTG | [200] |
| confusum_TN_LR | TTGCAGTTCACCTCGGARCCTTGTGGYGGCCTAGAGCCTCCRATATTCTG | [200] |
| confusum_GA_GC | TTGCAGTTCACCTCGGAGCCTTGTGGCGGCCTAGAGCCTCCGATATTCTG | [200] |
| confusum_GA_EC | TTGCAGTTCACCTCGGARCCTTGTGGCGGCCTAGARCCTCCGATATTYTG | [200] |
| confusum_TX_SJR | TTGCAGTTCACCTCGGAGCCTTGTGGYGGCCTAGAGCCTCCGATATTCTG | [200] |
| confusum_TX_SR | TTGCAGTTCACCTCGGAGCCTTGTGGCGGCCTAGAGCCTCCGATATTCTG | [200] |
| confusum_TX_Bayou | TTGCAGTTCACCTCGGAACCTTGTGGCGGACTAGAGCCTCCGATATTCTG | [200] |
| definitum_PA_LC | TTGMAGTTCACCTCAGAGCCTTGTGGCGGCCTAGAGCCTCCGATATTCTG | [200] |
| definitum_SC_GC | TTGCAGTTCACCTCAGAGCCTTGTGGCGGCCTAGAGCCTCCGATATTCTG | [200] |
| dixiense_GA_WC | TTGCAGTTCACCTCAGAGCCTTGTGGCGGCCTAGAGCCTCCGATATTTTG | [200] |
| dixiense_SC_LBC | TTGCAGTWCACCTCAGAGCCTTGTGGCGGCCTAGAGCCTCCGATATTTTG | [200] |
| dixiense_NC_QC | TTGCAGTACACCTCAGAGCCTTGTGGCGGCCTAGAGCCTCCGATATTTTG | [200] |
| dixiense_FL_CC | TTGCAGTTCACCTCAGAGCCTTGTGGCGGCCTAGAGCCTCCGATATTTTG | [200] |
| fibrinflatum_PA_DR | TTGCAGTTCACCTCGGAACCTTGTGGCGGCCTAGAGYCTCCGATATTCTG | [200] |
| fibrinflatum_ME_AR | TTRCAGTTCACCTCGGAACCTTGTGGCGGCCTAGAGCCTCCGATATTCTG | [200] |
| fibrinflatum_GA_FR | TTGCAGTTCACCTCGGAACCTTGTGGCGGCCTAGAGCCTCCGATATTCTG | [200] |
| haysi_AL_BCC3 | TTGCAGTTCACCTCGGAACCTTGTGGCGGCCTAGAGCCTCCGATATTCTG | [200] |
| haysi_TX_SJR | TTGCAGTTCACCTCGGAACCTTGTGGCGGCCTAGAGCCTCCGATATTCTG | [200] |
| infenestrum_NC_RR | TTGCAGTTCACCTCGGARCCWTGTGGYGGCCTAGARCCYCCGATATTCTG | [200] |
| infenestrum_SC_RBC | TTCCAGTTCACCTCGGARCCATGTGGTGGCCTAGAACCTCCGATATTCTG | [200] |
| jenningsi_TN_PR | TTRCAGTTCACCTCGGAACCTTGTGGCGGCCTAGAGCCTCCGATATTCTG | [200] |
| jenningsi_NC_ER | TTGCAGTTCACCTCGGAACCATGTGGCGTCCTAGAGCCTCCGATATTCTG | [200] |
| jenningsi_SC_FC | TTGCAGTTCACCTCGGAACCTTGTGGCGGCCTAGAGCCTCCGATATTCTG | [200] |
| jenningsi_PA_BR | TTGCAGTTCACCTCGGAACTTTGTGGCGGCCTAGAGCCTCCGATATTCTG | [200] |
| jenningsi_GA_AR | TTGCAGTTCACCTCGGAGCCATGTGGTGGCCTAGAGCCACCGATATTCTG | [200] |
| jonesi_FL_CC1 | TTGCAGTTCACTTCGGAACCGTGTGGCGGCCTAGAGCCTCCGATATTCTG | [200] |

Appendix 1. (Cont.)

| Taxa | Sequence | Base # |
|---|---|---|
| jonesi_AL_BCC | TTGCAGTTCACCTCGGAGCCTTGTGGCGGCCTAGAGCCTCCGATATTCTG | [200] |
| jonesi_NC_CC | TTGCAGTTCACCTCGGAGCCTTGTGGCGGCCTAGAGCCTCCGATATTCTG | [200] |
| jonesi_NC_QC | TTGCAGTTCACCTCGGAGCCTTGTGGCGGCCTAGAGCCTCCGATATTCTG | [200] |
| jonesi_GA_WC | TTGCAGTTCACCTCGGAGCCTTGTGGCGGCCTAGAGCCTCCGATATTCTG | [200] |
| krebsorum_NC_MC | TTGCAGTTCACCTCGGAGCCTTGTGGTGGCCTAGAGCCTCCGATATTCTG | [200] |
| krebsorum_SC_CC2 | TTGCAGTTCACCTCGGAGCCTTGTGGTGGCCTAGAGCCTCCGATATTCTG | [200] |
| lakei_PA_NC | TTGCARTTCACCTCGGAGGCTTGTGGCGGCCTAGAGCCTCCGATATTCTG | [200] |
| lakei_SC_BR | TTGCARTTCACCTCGGAGCCTTGTGGCGGCCTAGAGCCTCCGATATTCTG | [200] |
| lakei_FL_CR | TTGCAGTTCACCTCGGAGCCTTGTGGTGGCCTAGAACCTCCGATATTCTG | [200] |
| lakei_Taunt_8_MA_TR | TTGCAGTTCACCTCGGAGCCTTGTGGCGGCCTAGAGCCTCCGATATTCTG | [200] |
| lakei_Taunt_9_MA_TR | TTGCAGTTCACCTCGGAACCTTGTGGCAGCCTAGAGCCTCCGATATTCTG | [200] |
| luggeri_NWT | TTGCAGTTCACCTCGGAGCCATGTGGCGGCCTAGAGCCTCCGATATTCTG | [200] |

| | | |
|---|---|---|
| luggeri_NE_FR | TTGCAGTTCACCTCGGAGCCATGTGGTGGCCTAGAGCCTCCGATATTCTG | [200] |
| luggeri_NC_HR | TTGCAGTTCACCTCGGAGCCTTGTGGYGGCCTAGAGCCTCCGATATTCTG | [200] |
| luggeri_KY_GR3 | TTGCAGTTCACCTCGGAGCCTTGTGGTGGCCTAGAGCCTCCGATATTCTG | [200] |
| 'notiale AL BC5+6' | TTGCAGTTCACCTCGGAACCTTGTGGCGGCCTAGAGCCTTCGATATTCTG | [200] |
| notiale_VA_RR | TTGCAGTTCACCTCGGAACCTTGTGGCGGCCTAGAGACTCCGATATTCTG | [200] |
| notiale_TN_CC | TTGCAGTTCACCTCGGAGCCTTGTGGCGGCTTAGAGCCTCCGATATTCTG | [200] |
| notiale_SC_RBC | TTGCAGTTCACCTCGGAACCTTGTGGCGGCCTAGAGCCTCCGATATTCTG | [200] |
| 'notiale AL BC6+6' | TTGCAGTTCACCTCGGAACCTTGTGGCGGCCTAGAGCCTCCGATATTCTG | [200] |
| nyssa_AL_BC | TTGCAGTTCACCTCGGAACCTTGTGGCGGCCTAGAACCTCCGATATTCTG | [200] |
| nyssa_ME_AR | TTGCAGTTCACCTCGGAACCTTGTGGCGGCCTAGAACCTCCGATATTCTG | [200] |
| nyssa_VA_RR | TTGCAGTTCACCTCGGAACCTTGTGGCGGCCTAGAACCTCCGATATTCTG | [200] |
| nyssa_ME_PR | TTGCAGTTCACCTCGGAACCTTGTGGCGGCCTAGAGCCTCCGATATTCTG | [200] |
| nyssa_NC_TR | TTGCAGTTCACCTCGGAACCTTGTGGCGGCCTAGARCCTCCGATATTCTG | [200] |
| ozarkense_MO_GR2 | TTGCAGTTYACCTCRGARCCTTGTGGCGGCYTAGAGCCTCCGATATTCTG | [200] |
| ozarkense_MO_GR1 | TTGCAGTTCACCTCGGAGCCTTGTGGCGGCCTAGAGCCTCCGATATTCTG | [200] |
| penobsco_ME_PR1 | TTGCAGTTCACCTCGGAGCCWTGTGGTGGCCTAGAGCCTCCKATATTCTG | [200] |
| penobsco_ME_PR2 | TTGCAGTTCACCTCGGAGCCATGTGGTGGCCTAGAACCTCCGATATTCTG | [200] |
| podostemi_NC_TR | TTGCAGTTCACCTCGGAACCTTGTGGCAGTCTAGAGCCTCCGATATTCTG | [200] |
| podostemi_GA_AS | TTGCAGTTCACCTCGGAACCTTGTGGCGGTCTAGAGCCTCCGATATTCTG | [200] |
| podostemi_MS_BC | TTGCAGTTCACCTCGGAACCTTGTGGSGGTCTAGAGCCTCCGATATTCTG | [200] |
| podostemi_GA_CR | TTGCAGTTCACCTCGGAACCTTGTGGGGGTCTAGAGCCTCCGATATTCTG | [200] |
| remissum_NC_NR2 | TTGCAGTTCACCTCGGAACCCTGCGGYGGACTAGAGCCTCCGATATTCTG | [200] |
| remissum_NC_NR1 | TTGCAGTTCACCTCGGAACCCTGCGGCGGACTAGAGCCTCCGATATTCTG | [200] |
| remissum_NC_NR3 | TTGCAGTTCACCTCGGAACCCTGCGGCGGCCTAGAGCCTCCGATATTCTG | [200] |
| 'snowi AL BC 4+6' | TTGCAGTTCACCTCGGAACCTTGTGGCGGCCTAGAGCCTCCGATATTCTG | [200] |
| snowi_TN_CC | TTGCAGTTCACCTCGGAACCTTGTGGCGGCCTAGAGCCTCCGATATTCTG | [200] |
| 'snowi AL BC 4+4' | TTGCAGTTCACCTCGGAACCTTGTGGCGGCCTAGAGCCTCCGATATTCTG | [200] |
| taxodium_GA_CC2 | TTGCAGTTCACCTCGGAGCCTTGTGGTGGCCTAGAACCTCCGATATTCTG | [200] |
| taxodium_FL_CR | TTRCASTTCACCTCGGARCCTTGTGGCGGCCTAGAGCCTCCGATATTCTG | [200] |
| underhilli_AL_HC3 | TTGCAGTTCACCTCGGAACCTTGTGGCGGCCTAGAGCCTCCGATATTCTG | [200] |
| underhilli_GA_FR | TTGCAGTTCACCTCGGAACCTTGTGGCGGCCTAGAGCCTCCGATATTCTG | [200] |
| underhilli_GA_FS | TTGCAGTTCACCTCGGAACCTTGTGGCGGCCTAGAGCCTCCGATATTCTG | [200] |

| | | |
|---|---|---|
| tuberosum | GCGACCTTCCGGTCTATGGCTGGCCGTGCCTCAGATTCTCCCGGGTAACA | [250] |
| verecundum | GCGGCCTTCCGGTTTATGGCTGGCTGTGCCACAAATACTTCCGGGGAACA | [87] |
| decimatum | GCGGCCTTCCGGCCTATGGCTGGCCGCGCCACAAATTTTACCGGGCAACA | [250] |
| apricarium | GCGGCCTTCCGGCTTGTGGCTGGCCGTGCCACAAATACTTCCAGGAAACA | [250] |
| reptans | GCGGCCTTCCGGCCTATGGCTGGCCGTGCCACAAATACTTCCGGGCAACA | [250] |
| anchist_AL_HC | GCGTCCTTCCGGCCTGTGGCTGGCCGTGCCGCAAATTCTGCCGGGCAACA | [250] |
| anchist_DE_DR | GCGTCCTTCCGGCCTGTGGCTGGCCGTRCCGCAAATTCTGCCRGGCAACA | [250] |
| anchist_ME_AR | GCGTCCTTCCGGCCTGTGGCTGGCCGTGCCGCAAATTCTGCCGGGCAACA | [250] |
| anchist_NC_NR | GCGTCCTTCCGGCCTGTGGCTGGCCGTGCCGCAAATTCTGCCGGGCAACA | [250] |
| anchist_ME_KR | GCGTCCTTCCGGCCTGTGGCTGGCCGTGCCGCAAATTCTGCCGGGCAACA | [250] |
| aranti_GA_FS | GCGTCCTTCCGGCCTGTGGCTGGCCGTGCCGCAAATTCTTCCGGGCAACA | [250] |
| aranti_GA_AS | GCGTCCTTCCGGCCTGTGGCTGGCCGTGCCRCAAATTCTTCCGGGCAACA | [250] |
| aranti_AL_HC | GCGTCCTTCCGGCCTGTGGCTGGCCGTGCCRCAAATTCTKCCGGGCAACA | [250] |
| aranti_SC_LR | GCGTCCTTCCGGCCTGTGGCTGGCCGTACCGCAAATTCTGCCGGGCAACA | [250] |
| chlorum_NC_GC3 | GCGTCCTTCCGGCCTGTGGCTGGCCGTGCCGCAAATACTTCCGGGCAACA | [250] |
| chlorum_NC_GC1 | GCGCCCTTCCGGCCTGTGGTTGGCCGTGCCGCAAATWCTTCCGRGCAACA | [250] |

Appendix 1. (Cont.)

| Taxa | Sequence | Base # |
|---|---|---|
| chlorum_NC_GC4 | GCGTCCTTCTGGCCTGTGGCTGGCCGTGCCACAAATTCTTCCGGGCAACA | [250] |
| confusum_TN_LR | GCGYCCTTCCGGCCTGTGGTTGGCCGTGCCGCAAATTCTTCCGGGCAACA | [250] |
| confusum_GA_GC | GCGTCCTTCTGGCCTGTGGCTGGCCGTGCCGCAAATTCTGCCAGGCAACA | [250] |
| confusum_GA_EC | GCGTCCTTCCGGCCTGTGGCTGGCCGTGCCGCAAATTCTTCCGGGCAACA | [250] |
| confusum_TX_SJR | GCGCCCTWCCGGCCTGTGGTTGGCCGTKCCGCAAATTCTTCCGGGCAACA | [250] |
| confusum_TX_SR | GCGTCCTTCCGGCCTGTGGCTGGCCGTGCCRCAAATTCTTCCGGGCAACA | [250] |
| confusum_TX_Bayou | GCGTCCTTCCGGCCTGTGGCTGGCCGTGCCACAAATACTTCCGGGCAACA | [250] |
| definitum_PA_LC | GCGTCCTTCCGGCCTGTGGCTGGCCGTGCCGCAAATTCTGCCAGGCAACA | [250] |
| definitum_SC_GC | GCGTCCTTCCGGCCTGTGGCTGGCCGTGCCGCAAATTCTGCCAGGCAACA | [250] |
| dixiense_GA_WC | GCGCCCTTCCGGCCTGTGGTTGGCCGTGCCGCAAATTCTTCCGGGCAACA | [250] |
| dixiense_SC_LBC | GCGCCCTTCSGGCCTGTGGTTGGCCGTGCCGCAAATTCTTCCGGGCAACA | [250] |
| dixiense_NC_QC | GCGCCCTTCGGGCCTGTGGTTGGCCGTGCCGCAAATTCTTCCGGGCAACA | [250] |
| dixiense_FL_CC | GCGCCCTTCSGGCCTGTGGTTGGCCGTGCCGCAAATTCTTCCGGGCAACA | [250] |
| fibrinflatum_PA_DR | GCGTCCATCCGGCCTGTGGCTGGCCGTTCCGCAAATTCTGCCGGGCAACA | [250] |
| fibrinflatum_ME_AR | GCGTCCATCCGGCCTGTGGCTGGCCGTGCCGCAAATTCTGCCGGGCAACA | [250] |

| | | |
|---|---|---|
| fibrinflatum_GA_FR | GCGTCCTTCCGGCCTGTGGCTGGCCGTTCCGCAAATTCTGCCGGGCAACA | [250] |
| haysi_AL_BCC3 | GCGTCCTTCCGGCCTGTGGCTGGCCGTGCCACAAATTCTTCCGGGCAACA | [250] |
| haysi_TX_SJR | GCGTCCTTCCGGCCTGTGGCTGGCCGTGCCACAAATTCTTCCGGGCAACA | [250] |
| infenestrum_NC_RR | GCGTCCTTCCGGCCTGTGGCTGGCCGTGCCGCAAATTCTTCCRGGCAACA | [250] |
| infenestrum_SC_RBC | GCGTCCTTCCGGCCTGTGGCTGGCCGTGCCGCAAATTCTTCCGGGCAACA | [250] |
| jenningsi_TN_PR | GCGTCCTTCCGGCCTGTGGCTGGCCGTGCCGCAAATTCTGCCGGGAAACA | [250] |
| jenningsi_NC_ER | GCGTCCTTCCGGCCTGTGGCTGGCCGTGCCGCAAATACTGCCAGGCAATA | [250] |
| jenningsi_SC_FC | GCGTCCTTCCGGCCTGTGGCTGGCCGTGCCGCAAATTCTGCCGGGCAACA | [250] |
| jenningsi_PA_BR | GCGTCCTTCCGGCCTGTGGCTGGCCGTGCCGCAAATTCTGCCGGGCAACA | [250] |
| jenningsi_GA_AR | GCGTCCTTCCGGCTTGTGGCTAGCCGTACCGCAAATACTACCAGGCAATA | [250] |
| jonesi_FL_CC1 | GCGGCCTTCTGGCCTGTGGCTGGCCGTGCCGCAAATTCTGCCAGGCAACA | [250] |
| jonesi_AL_BCC | GCGTCCTTCCGGCCTGTGGTTGGCCGTGCCGCAAATTCTTCCGGGCAACA | [250] |
| jonesi_NC_CC | GCGTCCTTCCGGCCTGTGGTTGGCCGTGCCGCAAATTCTTCCGGGCAACA | [250] |
| jonesi_NC_QC | GCGTCCTTCCGGCCTGTGGYTGGCCGTGCCGCAAATTCTTCCGGGCAACA | [250] |
| jonesi_GA_WC | GCGTCCTTCCGGCCTGTGGTTGGCCGTGCCGCAAATTCTTCCGGGCAACA | [250] |
| krebsorum_NC_MC | GCGTCCTTCTGGCCTGTGGCTGGCCGTGCCGCAAATTCTGCCGGGCAACA | [250] |
| krebsorum_SC_CC2 | GCGTCCTTCTGGCCTGTGGCTGGCCGTGCCGCAAATTCTGCCGGGCAACA | [250] |
| lakei_PA_NC | GCGTCCTTCYGGCCTGTGGCTGGCCGTGCCGCAAATTCTKCCAGGCAACA | [250] |
| lakei_SC_BR | GCGTCCTTYCGGCCTGTGGCTGGCCGTGCCACAAATTCTTCCGGGCAACA | [250] |
| lakei_FL_CR | GCGTCCTTCTGGCCTGTGGCTGGCCGTGCCGCAAATTCTTCCGGGCAACA | [250] |
| lakei_Taunt_8_MA_TR | GCGTCCTTCTGGCCTGTGGCTGGCCGTGCCGCAAATTCTGCCRGGCAACA | [250] |
| lakei_Taunt_9_MA_TR | GCGYCCTTCCGGCCTGTGGTTGGCCGTGCCGCAAATTCTTCCGGGCAACA | [250] |
| luggeri_NWT | GCGTCCTTCCGGCCTGTGGTTGGCCGTGCCGCAAATTCTTCCCGGCAACA | [250] |
| luggeri_NE_FR | GCGTCCTTCCGGCCTGTGGTTGGCCGTGCCGCAAATTCTTCCCGGCAACA | [250] |
| luggeri_NC_HR | GCGTCCTTCCGGCCTGTGGTTGGCCGTGCCGCAAATTCTTCCCGGCAACA | [250] |
| luggeri_KY_GR3 | GCGTCCTTCCGGCCTGTGGTTGGCCGTGCCGCAAATTCTTCCCGGYAACA | [250] |
| 'notiale AL BC5+6' | GCGTCCTTCCGGCCTGTGGCTGTCCGTGCCGCAAATTCTGCCGGGCAACA | [250] |
| notiale_VA_RR | GCGTCCTTCCGGCCTGTGGCTGGCCGTGCCGCAAATTCTGCCGGGCAACA | [250] |
| notiale_TN_CC | GCGTCCTTCCGGCCTGTGGCTGGCCGTGCCGCAAATTCTGCCGGGCAACA | [250] |
| notiale_SC_RBC | GCGTCCTTCCGGCCTGTGGCTGGCCGTGCCGCAAATTCTGCCGGGCAACA | [250] |
| 'notiale AL BC6+6' | GCGTCCTTCCGGCCTGTGGCTGGCCGTGCCGCAAATTCTGCCGGGCAACA | [250] |
| nyssa_AL_BC | GCGTCCTTCCGGCCTGTGGCTGGCCGTGCCGCAAATTCTGCCRGGCAACA | [250] |
| nyssa_ME_AR | GCGTCCTTCTGGCCTGTGGCTGGCCGTGCCGCAAATTCTGCCGGGCAACA | [250] |
| nyssa_VA_RR | GCGTCCTTCCGGCCTGTGGCTGGCCGTGCCGCAAATTCTGCCGGGCAACA | [250] |
| nyssa_ME_PR | GCGTCCTTCCGGCCTGTGGYTGGCCGTGCCGCAAATTCTKCCGGGCAACA | [250] |
| nyssa_NC_TR | GCGTCCTTCCGGCCTGTGGCTGGCCGTGCCSCAAATTCTKCCGGGCAACA | [250] |
| ozarkense_MO_GR2 | GCGTCCTTCCGGYCTGTGGCTGGCCGTGCCGCAAATTCTTCCGGGCAACA | [250] |
| ozarkense_MO_GR1 | GCGTCCTTCTGGCCTGTGGCTGGCAGTGCCGCAAATTCTTCCAGGAAACA | [250] |
| penobsco_ME_PR1 | GCGTCCTTCYGGCCTGTGGCTGGCCGTKCCRCAAATTCTTCCGGGCAACA | [250] |
| penobsco_ME_PR2 | GCGTCCTTCCGGCCTGTGGCTGGCCGTGCCGCAAATTCTGCCAGGCAACA | [250] |
| podostemi_NC_TR | GCGTCCGTCCGGCCTGTGGCTGGCCGTGCCGCAAATTCTTCCGGGCAACA | [250] |
| podostemi_GA_AS | GCGTCCGTCCGGCCTGTGGCTGACCGTGCCGCAAATTCTTCCGGGCAACA | [250] |
| podostemi_MS_BC | GCGTCCGTCCGGTCTGTGGCTGGCCGTGCCGCAAATTCTTCCGGGCAACA | [250] |
| podostemi_GA_CR | GCGTCCGTCCGGCCTGTGGCTGGCCGTGCCGCAAATTCTTCCGGGCAACA | [250] |
| remissum_NC_NR2 | GCGTCCTTCTGGCCTGTGGTTGGCCGTTCCACAAATTCTTCCGGGCAACA | [250] |
| remissum_NC_NR1 | GCGTCCTTCCGGCCTGTGGCTGGCCGTGCCGCAAGTTCTGCCAGGCAACA | [250] |
| remissum_NC_NR3 | GCGTCCTTCCGGCCTGTGGCTGGCMGTGCCRCAARTTCTGCCRGGCAACA | [250] |

Appendix 1. (Cont.)

| Taxa | Sequence | Base # |
|---|---|---|
| 'snowi AL BC 4+6' | GCGTCCTTCCGGCCTGTGGCTGGCCGTGCCGCAAATTCTGCCGGGCAACA | [250] |
| snowi_TN_CC | GCGTCCTTCCGGCCTGTGGCTGGCCGTGCCGCAAATTCTGCCGGGCAACA | [250] |
| 'snowi AL BC 4+4' | GCGTCCTTCCGGCCTGTGGCTGGCCGTGCCGCAAATGCTGCCGGGCAACA | [250] |
| taxodium_GA_CC2 | GCGTCCTTCTGGCCTGTGGCTGGCCGTGCCGCAAATTCTKCCKGGCAACA | [250] |
| taxodium_FL_CR | GCGTCCTTCCGGCCTGTGGCTGGCCGTGCCACAAATTCTTCCGGGCAACA | [250] |
| underhilli_AL_HC3 | GCGTCCTTCCGGCCTGTGGCTGGCCGTGCCRCAAATTCTGCCGGGCAACA | [250] |
| underhilli_GA_FR | GCGTCCTTCCGGCCTGTGGCTGGCCGTGCCGCAAATTCTGCCGGGCAACA | [250] |
| underhilli_GA_FS | GCGTCCTTCCGGCCTGTGGCTGGCCGTKCCGCAAATTCTGCCGGGCAACA | [250] |

| | | |
|---|---|---|
| tuberosum | AGTACAGGATCACGCTGTTCGAAAAGAATGGATTGCGCCATCGGGAACTG | [300] |
| verecundum | AATACAGGATCACACTGTTCGAAAAGAATGGATTGCGCCATCGGGAACTT | [137] |
| decimatum | AATACAGGATCACATTGTTCGAAAAGAACGGTTTGCGTCATCGGGAACTG | [300] |
| apricarium | AATACAGGATCACACTGTTTGAAAAGAACGGGTTGCGTCATCGGGAACTG | [300] |
| reptans | AATACAGGATCACACTGTTTGAAAAGAACGGATTGCGTCATCGGGAACTG | [300] |
| anchist_AL_HC | AATACAGGATCACTCTGTTTGAAAAGAATGGTCTGCGTCATCGTGAACTG | [300] |
| anchist_DE_DR | AATACAGGATCACTCTGTTTGAAAAGAATGGTCTSCGTCATCGAGAACTG | [300] |

| | | |
|---|---|---|
| anchist_ME_AR | AATACAGGATCACTCTGTTTGAAAAGAATGGTCTGCGTCATCGAGAACTG | [300] |
| anchist_NC_NR | AATACAGGATCACTCTGTTTGAAAAGAATGGTCTGCGTCATCGAGAACTG | [300] |
| anchist_ME_KR | AATACAGGATYACTCTGTTTGAAAAGAATGGWCTGCGTCATCGGGARCTG | [300] |
| aranti_GA_FS | AATAYAGGATCACTCTGTTTGAAAAGAATGGACTGCGTCATCGGGAACTG | [300] |
| aranti_GA_AS | AATAYAGGATCACTCTGTTTGAAAAGAATGGACTGCGTCATCGGGAACTG | [300] |
| aranti_AL_HC | AATACAGGATCACTCTGTTTGAAAAAAATGGWCTGCGTCATCGGGAACTG | [300] |
| aranti_SC_LR | AATACAGGATCACACTRTTTGAAAAGAATGGTCTGCGTCATCGGGAACTG | [300] |
| chlorum_NC_GC3 | AATACAGGATCACACTGTTTGAAAAGAATGGACTGCGTCATCGGGAACTG | [300] |
| chlorum_NC_GC1 | AATACAAGATCACACTGTTTGAAAAGAATGGACTGCGTCATCGGGAACTG | [300] |
| chlorum_NC_GC4 | AATACAGGATCACACTGTTTGAAAAGAATGGACTACGTCATCGGGAACTG | [300] |
| confusum_TN_LR | AATACARGATCACMCTGTTTGAAAAGAATGGACTGCGTCATCGGGAACTG | [300] |
| confusum_GA_GC | AATACAAGATCACTCTGTTTGAAAAGAATGGACTGCGTCATCGGGAACTG | [300] |
| confusum_GA_EC | AATACAAGATCACACTGTTTGAAAAGAATGGACTGCGTCATCGGGAACTG | [300] |
| confusum_TX_SJR | AATACAAGATCACACTGTTTGAAAAGAATGGACTGCGTCATCGGGAACTG | [300] |
| confusum_TX_SR | AATACAGGATCACTCTGTTTGAAAAGAATGGACTGCGTCATCGRGAACTG | [300] |
| confusum_TX_Bayou | AATACAGGATCACTCTGTTTGAAAAGAATGGKCTGCGTCATCGGGAACTG | [300] |
| definitum_PA_LC | AATACAGGATCACACTGTTTGAAAAGAATGGACTGCGTCATCGGGATCTG | [300] |
| definitum_SC_GC | AATACAGGATCACACTGTTTGAAAAGAATGGACTGCGTCATCGGGATCTG | [300] |
| dixiense_GA_WC | AATACAGGATCACACTGTTTGAAAAGAATGGATTGCGTCATCGGGAACTG | [300] |
| dixiense_SC_LBC | AATACAGGATCACACTGTTTGAAAAGAATGGATTGCGTCATCGGGAACTG | [300] |
| dixiense_NC_QC | AATACAGGATCACACTGTTTGAAAAGAATGGATTGCGTCATCGGGAACTG | [300] |
| dixiense_FL_CC | AATACAGGATCACACTGTTTGAAAAGAATGGATTGCGTCATCGGGAACTG | [300] |
| fibrinflatum_PA_DR | AATACAGGATCACACTGTTTGAAAAGAATGGACTGCGTCATCGGGAACTA | [300] |
| fibrinflatum_ME_AR | AATACAGGATCACACTGTTTGAAAAGAATGGACTGCGCCATCGGGAACTG | [300] |
| fibrinflatum_GA_FR | AATACAGGATCACACTGTTTGAAAAGAATGGACTGCGTCATCGGGAACTA | [300] |
| haysi_AL_BCC3 | AATACAGGATCACACTGTTTGAAAAGAATGGACTGCGTCATCGGGAACTG | [300] |
| haysi_TX_SJR | AATACAGGATCACACTGTTTGAAAAGAATGGACTGCGTCATCGGGAACTG | [300] |
| infenestrum_NC_RR | AATACAGGATYACWCTGTTYGAAAAGAATGGAYTGCGTCATCGGGAACTG | [300] |
| infenestrum_SC_RBC | AATACAGGATTACTCTGTTTGAAAAGAATGGACTGCGTCATCGGGAACTG | [300] |
| jenningsi_TN_PR | AATACAGGATCACACTGTTTGAAAAGAATGGACTGCGTCATCGGGAACTG | [300] |
| jenningsi_NC_ER | AATACAGGATCACTCTGTTTGAAAAGAATGGACTGCGTCATCGGGAACTG | [300] |
| jenningsi_SC_FC | AATACAGGATCACACTGTTTGAAAAGAATGGACTGCGTCATCGGGAACTG | [300] |
| jenningsi_PA_BR | AATACAGGATCACACTGTTTGAAAAGAATGGACTGCGTCATCGGGAACTG | [300] |
| jenningsi_GA_AR | AATACAGGATCACTCTGTTTGAAAAGAATGGACTGCGTCATCGGGAACTG | [300] |
| jonesi_FL_CC1 | AATACAGGATCACACTGTTTGAAAAGAATGGACTGCGTCATCGGGAACTG | [300] |
| jonesi_AL_BCC | AATACAGGATCACACTGTTTGAAAAGAATGGACTGCGTCATCGGGAACTG | [300] |
| jonesi_NC_CC | AATACAGGATCACACTGTTTGAAAAGAATGGACTGCGTCATCGGGAACTG | [300] |
| jonesi_NC_QC | AATACAGGATCACACTGTTTGAAAAGAATGGACTGCGTCATCGGGAACTG | [300] |
| jonesi_GA_WC | AATACAGGATCACACTGTTTGAAAAGAATGGACTGCGTCATCGGGAACTG | [300] |
| krebsorum_NC_MC | AATACAAGATCACACTGTTTGAAAAGAATGGACTGCGTCATCGAGAACTG | [300] |
| krebsorum_SC_CC2 | AATACAAGATCACACTGTTTGAAAAGAATGGACTGCGTCATCGAGAACTG | [300] |
| lakei_PA_NC | AATACARGATCACTCTGTTTGAAAAGAATGGACTRCGTCATCGGGAACTG | [300] |
| lakei_SC_BR | AATACAGGATCACACTGTTTGAAAAGAATGGACTRCGTCATCGGGAACTG | [300] |
| lakei_FL_CR | AATACAGGATCACACTGTTTGAAAAGAATGGACTGCGTCATCGGGAACTG | [300] |

Appendix 1. (Cont.)

| Taxa | Sequence | Base # |
|---|---|---|
| lakei_Taunt_8_MA_TR | AATACAAGATCACTCTGTTTGAAAAGAATGGACTGCGTCATCGGGAACTG | [300] |
| lakei_Taunt_9_MA_TR | AATACAAGATCACACTGTTTGAAAAGAATGGACTGCGTCATCGGGAACTG | [300] |
| luggeri_NWT | AATACAGGATCACAYTGTTTGAAAAGAATGGATTGCGTCATCGGGAACTG | [300] |
| luggeri_NE_FR | AATACAGGATCACATTGTTTGAAAAGAATGGATTGCGTCATCGGGAACTG | [300] |
| luggeri_NC_HR | AATACAGGATCACACTGTTTGAAAAGAATGGATTGCGTCATCGGGAACTG | [300] |
| luggeri_KY_GR3 | AATACAGGATCACACTGTTTGAAAAGAATGGATTGCGTCATCGGGAACTG | [300] |
| 'notiale AL BC5+6' | AATACAGGATCACACTGTTTGAAAAGAATGGACTGCGTCATCGGGAACTA | [300] |
| notiale_VA_RR | AATACAGGATCACACTGTTTGAAAAGAATGGACTGCGCCATCGGGAACTG | [300] |
| notiale_TN_CC | AATACAGGATCACACTGTTTGAAAAGAATGGACTGCGTCATCGGGAACTR | [300] |
| notiale_SC_RBC | AATACAGGATCACACTGTTTGAAAAGAATGGACTGCGTCATCGGGAACTR | [300] |
| 'notiale AL BC6+6' | AATACAGGATCACACTGTTTGAAAAGAATGGACTGCGCCATCGGGAACTG | [300] |
| nyssa_AL_BC | AATACAGGATCACTCTGTTTGAAAAGAATGGTCTGCGTCATCGAGAACTG | [300] |
| nyssa_ME_AR | AATACAGGATCACTCTGTTTGAAAAGAATGGTCTGCGTCATCGAGAACTG | [300] |
| nyssa_VA_RR | AATACAGGATCACTCTGTTTGAAAAGAATGGTCTGCGTCATCGAGAACTG | [300] |
| nyssa_ME_PR | AATACAGGATCACWCTGTTTGAAAAGAATGGWCTGCGTCAYCGAGAACTG | [300] |
| nyssa_NC_TR | AATACASGATCACWCTGTTTGAAAAGAATGGWCTGCGTCATCGAGAACTG | [300] |
| ozarkense_MO_GR2 | AATACAGGATCACACTGTTTGAAAAGAATGGACTGCGTCATCGGGAACTG | [300] |
| ozarkense_MO_GR1 | AATACAGGATYACACTGTTTGAAAAGAATGGATTGCGTCATCGAGAACTG | [300] |
| penobsco_ME_PR1 | AATACAGGATTACACTGTTTGAAAAGAATGGACTGCGTCATCGAGAACTG | [300] |
| penobsco_ME_PR2 | AATACAAGATCACWCTGTTTGAAAAGAATGGACTGCGTCATCGGGAACTG | [300] |
| podostemi_NC_TR | AATACAGGATCACTTTATTTGAAAAGAATGGACTGCGTCATCGGGAACTG | [300] |

| | | |
|---|---|---|
| podostemi_GA_AS | AATACAGGATCACTTTATTTGAAAAGAATGGACTGCGTCATCGGGAACTG | [300] |
| podostemi_MS_BC | AATACAGGATCACTTTATTTGAAAAGAATGGACTGCGTCATCGGGAACTG | [300] |
| podostemi_GA_CR | AATACAGGATCACTTTATTTGAAAAGAATGGACTGCGTCATCGGGAACTG | [300] |
| remissum_NC_NR2 | AATACAGGATTACACTGTTTGAAAAGAATGGACTGCGTCATCGAGAACTG | [300] |
| remissum_NC_NR1 | AATACAGGATCACTCTGTTTGAAAAGAATGGACTGCGTCATCGAGAACTG | [300] |
| remissum_NC_NR3 | AATACAGGATCACACTGTTTGAAAAGAATGGACTGCGTCATCGRGAACTG | [300] |
| 'snowi AL BC 4+6' | AATACAGGATCACACTGTTTGAAAAGAATGGACTGCGCCATCGGGAACTG | [300] |
| snowi_TN_CC | AATACAGGATCACACTGTTTGAAAAGAATGGACTGCGCCATCGGGAACTG | [300] |
| 'snowi AL BC 4+4' | AATACAGGATCACACTGTTTGAAAAGAATGGACTGCGYCATCGGGAACTG | [300] |
| taxodium_GA_CC2 | AATAYAGGATCACRCTGTTTGAAAAGAATGGACTGCGTCATCGGGAACTG | [300] |
| taxodium_FL_CR | AATACASGATCACACTGTTTGAAAARAATGGACTGCGTCATCGGGAACTG | [300] |
| underhilli_AL_HC3 | AATACAGGATCACACTGTTTGAAAAGAATGGACTGCGTCATCGGGAACTA | [300] |
| underhilli_GA_FR | AATACAGGATCACACTGTTTGAAAAGAATGGACTGCGTCATCGGGAACTA | [300] |
| underhilli_GA_FS | AATACARGATCACACTGTTTGAAAAGAATGGACTGCGTCATCGGGAACTA | [300] |

| | | |
|---|---|---|
| tuberosum | TCGTTGCCTTTTAAGCGAGAAGACCAAATTGTCAAGTCTTTGGCTTGGAA | [350] |
| verecundum | GTGTTGCCATTCGTGCGAGAAGAGCAAAGTGTCAGGTCTTTGGCTTGGAA | [187] |
| decimatum | GCGTTACCATTCGTGCGAGATAAGCAAAGGGTCAGGTCTTTGGCTTGGAA | [350] |
| apricarium | GCGTTACCATTCGTGCGAGAAGAGCGATGTGTCAGGTCTCTTGCTTGGAA | [350] |
| reptans | GCGTTGCCATTCGTGCGAGAAGATCAATGTGTCAGGTCTCTGGCTTGGAA | [350] |
| anchist_AL_HC | GCGCTRCCATTCGTGCGAGAAGAGCAAAGTGTTAAGTCTCTAGCTTGGAA | [350] |
| anchist_DE_DR | GCGCTGCCATTCGTGCGAGAAGAGCAAAGTGTTAAGTCTCTARCTTGGAA | [350] |
| anchist_ME_AR | GCGCTRCCATTCGTGCGAGAAGAGCAAAGTGTTAAGTCTCTAGCTTGGAA | [350] |
| anchist_NC_NR | GCGCTGCCATTCGTGCGAGAAGAGCAAAGTGTTAAGTCTCTAGCTTGGAA | [350] |
| anchist_ME_KR | GCGCTGCCATTCGTGCGAGAAGAGCAAAGAGTTAAGTCTCTAGCTTGGAA | [350] |
| aranti_GA_FS | GCGCTGCCATTCGTGCGAGAAGAGCAAAGTGTTAAGTCTCTTGCTTGGAA | [350] |
| aranti_GA_AS | GCGCTGCCATTCGTGCGAGAAGAGCAAAGTGTTAAGTCTCTTGCTTGGAA | [350] |
| aranti_AL_HC | GCGCTGCCATTCGTGCGAGAAGAGCAAAGTGTTAAGTCTCTTGCTTGGAA | [350] |
| aranti_SC_LR | GCGCTGCCATTCGTGCGAGAAGAGCAAAGTGTCAAGTCTCTTGCTTGGAA | [350] |
| chlorum_NC_GC3 | GCGCTGCCGTTCGTGMGAGAAGAGCAACKYGTTAAGTCTCTTGCTTGGAA | [350] |
| chlorum_NC_GC1 | GCRCTGCCRTTCGTCCGAGAAGAGCAAATTGTTAAGTCTCTTGCTTGGAA | [350] |
| chlorum_NC_GC4 | GCACTGCCATTCGTGCGAGAAGAGCAACGCGTTAAGTCTCTTGCTTGGAA | [350] |
| confusum_TN_LR | GCRCTGCCATTCGTGCGAGAAGAGCAAATYGTTAARTCTCTTGCTTGGAA | [350] |
| confusum_GA_GC | GCGCTGCCATTCGTGMGAGAAGAGCAAATCGTTAARTCTCTTGCTTGGAA | [350] |
| confusum_GA_EC | GCRCTGCCATTCGTGCGAGAAGAGCAAATTGTTAARTCTCTTGCTTGGAA | [350] |
| confusum_TX_SJR | GCGCTGCCAYTCGTGCGAGAAGAGCAACKCGTTAAGTCTCTTGCTTGGAA | [350] |
| confusum_TX_SR | GCRCTGCCATTCGTGCGAGAAGAGCAAATTGTYAAGTCTCTTGCTTGGAA | [350] |
| confusum_TX_Bayou | GCGCTGCCATTCGTGCGAGAAGAGCAAATTGTYAAGTCTCTTGCTTGGAA | [350] |
| definitum_PA_LC | GCCCTGCCATTCGCACGAGAAGAGCAAATTGTTAAGTCTCTTGCTTGGAA | [350] |

Appendix 1. (Cont.)

| Taxa | Sequence | Base # |
|---|---|---|
| definitum_SC_GC | GCCCTGCCATTCGCACGAGAAGAGCAAATTGTTAAGTCTCTTGCTTGGAA | [350] |
| dixiense_GA_WC | GCGCTGCCAYTCGTGCGAGAAGAGCAAATCGTTAACTCTCTTGCTTGGAA | [350] |
| dixiense_SC_LBC | GCGCTGCCAYTCGTGCGAGAAGAGCAAATCGTTAACTCTCTTGCTTGGAA | [350] |
| dixiense_NC_QC | GCGCTGCCATTCGTGCGAGAAGAGCAAATCGTTAACTCTCTTGCTTGGAA | [350] |
| dixiense_FL_CC | GCGCTGCCATTCGTGCGAGAAGAGCAAATCGTTAACTCTCTTGCTTGGAA | [350] |
| fibrinflatum_PA_DR | GCGCTGCCATTCGTRCGAGAAGAACAAAGGGTTAAGTCTCTTGCTTGGAA | [350] |
| fibrinflatum_ME_AR | GCACTGCCATTCGTGCGAGAAGAACAAAGGGTTAAGTCTCTTGCTTGGAA | [350] |
| fibrinflatum_GA_FR | GCGCTGCCATTCGTACGAGAAGAACAAAGGGTTAAGTCTCTTGCTTGGAA | [350] |
| haysi_AL_BCC3 | GCGCTGCCATTCGTAAGAGAAGATCAAATTGTTAAGTCTCTCGCTTGGAA | [350] |
| haysi_TX_SJR | GCGCTGCCATTCGTAAGAGAAGATCAAATTGTTAAGTCTCTCGCTTGGAA | [350] |
| infenestrum_NC_RR | GCGCTSCCRTTCGTGCGAGAAGAGCAAAGGRTTAAGTCTCTYGCTTGGAA | [350] |
| infenestrum_SC_RBC | GCGCTGCCATTCGTGCGAGAAGAGCAAAGGATTAAGTCTCTCGCTTGGAA | [350] |
| jenningsi_TN_PR | GCGCTGCCATTCGTGCGAGAAGACCAAAGGGTGAAATCTCTTGCTTGGAA | [350] |
| jenningsi_NC_ER | GCGCTGCCATTCGTGCGAGAAGACCAAAGGGTGAAATCTCTTGCTTGGAA | [350] |
| jenningsi_SC_FC | GCGCTGCCATTCGTGCGAGAAGACCAAAGGGTGAAATCTCTTGCTTGGAA | [350] |
| jenningsi_PA_BR | GCGCTGCCATTCGTGCGAGAAGACCAAAGGGTGAAATCTCTTGCTTGGAA | [350] |
| jenningsi_GA_AR | GCGCTGCCATTCGTGCGAGAAGACCAAAGGGTAAAATCTCTTGCTTGGAA | [350] |
| jonesi_FL_CC1 | GCGCTGCCATTCGTGCGAGACGAGCAACGCGTTAAGTCTCTTGCTTGGAA | [350] |
| jonesi_AL_BCC | GCGCTGCCATTCGTGCGAAAAGAGCAAAGTGTTAAGTCTCTTGCTTGGAA | [350] |
| jonesi_NC_CC | GCGCTGCCATTCGTGCGARAAGAGCAAAGTGTTAAGTCTCTTGCTTGGAA | [350] |
| jonesi_NC_QC | GCGCTGCCATTCGTGCGAGAAGAGCAAAGTGTTAAGTCTCTTGCTTGGAA | [350] |
| jonesi_GA_WC | GCGCTGCCATTCGTGCGAGAAGAGCAAAGTGTTAAGTCTCTTGCTTGGAA | [350] |
| krebsorum_NC_MC | GCGCTGCCATTCGCGCGGGAAGAGCAAAGGGTTAAGTCTCTTGCTTGGAA | [350] |
| krebsorum_SC_CC2 | GCGCTGCCATTCGCGCGAGAAGAGCAAAGGGTTAAGTCTCTTGCTTGGAA | [350] |

| | | |
|---|---|---|
| lakei_PA_NC | GCGCTGCCATTCGTGCGAGAAGAGCAAATCGTTAARTCTCTTGCTTGGAA | [350] |
| lakei_SC_BR | GCACTGCCATTTGTGCGAGAAGAGCAACGCGTTAAGTCTCTTGCTTGGAA | [350] |
| lakei_FL_CR | GCGCTGCCATTCGTGCGAGAAGAGCAACGCGTTAAGTCTCTTGCTTGGAA | [350] |
| lakei_Taunt_8_MA_TR | GCRCTGCCATTCGTGCGAGAAGAGCAAATCGTTAAGTCTCTTGCTTGGAA | [350] |
| lakei_Taunt_9_MA_TR | GCACTGCCATTCGTCCGAGAAGAGCAAATTGTTAAGTCTCTYGCTTGGAA | [350] |
| luggeri_NWT | GCGCTGCCGTTCGTGCGAGAAGAGCAAAAGGTTAAGTCGCTTGCTTGGAA | [350] |
| luggeri_NE_FR | GCGCTGCCGTTCGTGCGAGAAGAGCAAAAGGTTAAGTCGCTTGCTTGGAA | [350] |
| luggeri_NC_HR | GCGCTGCCGTTCGTGCGAGAAGAGCAAAAGGTTAAGTCKCTTGCTTGGAA | [350] |
| luggeri_KY_GR3 | GCGCTRCCATTCGTGCGAGAAGAGCAAAAGGTTAAGTCTCTAGCTTGGAA | [350] |
| 'notiale AL BC5+6' | GCRCTGCCATTCGTGCGAGAAGAACAAATGGTTAAGTCTCTTGCTTGGAA | [350] |
| notiale_VA_RR | GCACTGCCATTCGWGCGAGAAGAACAAAGGGTTAAGTCTCTTGCTTGGAA | [350] |
| notiale_TN_CC | GCRCTGCCATTCGTGCGAGAAGAGCAAAGGGTTAAGTCTCTTGATTGGAA | [350] |
| notiale_SC_RBC | GCRCTGCCATTCGTGCGAGAAGAACAAAGGGTTAAGTCTCTTGCTTGGAA | [350] |
| 'notiale AL BC6+6' | GCACTGCCATTCGTGCGAGAAGAACAAATTGTTAAGTCTCTTGCTTGGAA | [350] |
| nyssa_AL_BC | GCGCTGCCATTCGTGCGAGAAGAGCAAAGTGTTAAGTCTCTAGCTTGGAA | [350] |
| nyssa_ME_AR | GCGCTGCCATTCGGGCGAGAAGAGCAAAGGGTTAAGTCTCTAGCTTGGAA | [350] |
| nyssa_VA_RR | GCGCTGCCATTCGTGCGAGAAGAGCAAAGTGTTAAGTCTCTAGCTTGGAA | [350] |
| nyssa_ME_PR | GCGCTGCCATTCGTGCGAGAAGAGCAAAGTGTTAAGTCTCTAGCTTGGAA | [350] |
| nyssa_NC_TR | GCGCTGCCAYTCGTGCGAGAAGAGCAAAGTGTTAAGTCTCTAGCTTGGAA | [350] |
| ozarkense_MO_GR2 | GCGCTGCCATTCGTCCGRGAAGAGMAAATTGTTAAGTCTCTTGCTTGGAA | [350] |
| ozarkense_MO_GR1 | CCGCTGCCATTCGTCCGAGAAGAGCAAATTGTTAAGTCTCTTGCTTGGAA | [350] |
| penobsco_ME_PR1 | GCGCTGCCATTCGTGCGAGAAGAGCAAAGTGTTAAGTCTCTCGCTTGGAA | [350] |
| penobsco_ME_PR2 | GCGCTGCCATTCGTGCGAGAAGAGCAAAGGATTAAGTCTCTCGCTTGGAA | [350] |
| podostemi_NC_TR | GCGCTGCCATTCGTGCGAGAAGAACAAAGTGTCAAGTCTCTTGCTTGGAA | [350] |
| podostemi_GA_AS | GCGCTGTCATTCGTGCGAGAAGAGCAAAGTGTCAAGTCTCTTGCTTGGAA | [350] |
| podostemi_MS_BC | GCGCTGCCATTCGTGCGAGAAGAGCAAAGTGTCAAGTCTCTTGCTTGGAA | [350] |
| podostemi_GA_CR | GCGCTGYCATTCGTGCGAGAAGAGCAAAGTGTCAAGTCTCTTGCTTGGAA | [350] |
| remissum_NC_NR2 | GCGYTGCCATTCGTGCGAGAAGAGCAAAGTRTYAAGTCTCTTGCTTGGAA | [350] |
| remissum_NC_NR1 | GCGCTGCCATTCGTGCGAGAAGAGCAAAGTGTTAAGTCTCTTGCTTGGAA | [350] |
| remissum_NC_NR3 | GCGTTGCCATTYGTGCGAGAAGAGCAAAGTGTYAAGTCTCTTGCTTGGAA | [350] |
| 'snowi AL BC 4+6' | GCACTGCCAYTCGTGCGAGAAGAACAAATTGTTAAGTCTCTTGCTTGGAA | [350] |
| snowi_TN_CC | GCACTGCCATTCGTGCGAGAAGAACAAAKDGTTAAGTCTCTTGCTTGGAA | [350] |
| 'snowi AL BC 4+4' | GCACTGCCATTCGTGCGAGAAGAACAAAGGGTTAAGTCTCTTGCTTGGAA | [350] |
| taxodium_GA_CC2 | GCGCTGCCATTCGTGCGAGAAGAGCAACGTGTTAAGTCTCTTGCTTGGAA | [350] |
| taxodium_FL_CR | GCGCTGCCATTCGTMCGAGAAGAGCAAAKCGTTAAGTCTCTTGCTTGGAA | [350] |
| underhilli_AL_HC3 | GCGCTGCCATTCGTGCGAGAAGAGCAAAGGGTTAAGTCTCTTGCTTGGAA | [350] |
| underhilli_GA_FR | GCGCTGCCATTCGTGCGAGAAGAGCAAAGGGTTAAGTCTCTTGCTTGGAA | [350] |
| underhilli_GA_FS | GCGCTGSCATTCGTRCGAGAAGAACAAAGGGTWAAGTCTCTTGCTTGGAA | [350] |

Appendix 1. (Cont.)

| Taxa | Sequence | Base # |
|---|---|---|
| tuberosum | CAGCGACTCGGAAATTTTGCTGATCGAAACGCAACACGTTGCGGATGAGT | [400] |
| verecundum | TAGTGATTCTGAAATATTATTGATAGAAACCCAGCACGTTGCGAATGCAT | [237] |
| decimatum | TAGTGACTCTGAAATTTTATTGATAGAAACCCAGCACGTTGCGGATGCGT | [400] |
| apricarium | TAGTGACTCAGAAGTTTTGTTGATAGAAACCCAGGACATTGCGGATGCGT | [400] |
| reptans | CAGTGATTCAGAAATTTTGTTGATAGAAACCCAGTACGTTGCGGATGCTT | [400] |
| anchist_AL_HC | TAGTGATTCTGAAATTTTGTTGATAGAAACCCAGCACGTTGCGGATGTTG | [400] |
| anchist_DE_DR | TAGTGATTCTGAAATTTTGTTGATAGAAACCCAGCACGYTGCGGATGTTG | [400] |
| anchist_ME_AR | TAGTGATTCTGAAATTTTGTTGATAGAAACCCAGCACGTTGCGGATGTTG | [400] |
| anchist_NC_NR | TAGTGATTCTGAAATTTTGTTGATAGAAACCCAGCACGTTGCGGATGTTG | [400] |
| anchist_ME_KR | TAGTGATTCTGAAATTTTGTTGATAGAAACCCAGCACGTTGCGGATGTTG | [400] |
| aranti_GA_FS | TAGTGATTCTGAAATTTTGTTGATAGAAACCCAGCACGTTGCGAATGTCG | [400] |
| aranti_GA_AS | TAGTGATTCTGAAATTTTGTTGATAGAAACCCAGCACGTTGCGAATGTCG | [400] |
| aranti_AL_HC | TAGTGATTCTGAAATTTTGTTGATAGAAACCCAGCACGTTGCGGATGTCG | [400] |
| aranti_SC_LR | TAGTGATTCTGAAATTTTGTTGATAGAAACCCAGCACGTTGCGGATGTCG | [400] |
| chlorum_NC_GC3 | TAGTGATTCTGAAATTTTGCTGATAGAAACCCAGCACGTTGCGGATGTCG | [400] |
| chlorum_NC_GC1 | TAGTGATTCTGAAATCTTGTTGATAGAAACCCAACACGTTGCGGATGTTG | [400] |
| chlorum_NC_GC4 | TAGTGATTCTGAAATTTTATTGATAGAAACCCAGCACGTTGTGGATGTCG | [400] |
| confusum_TN_LR | TAGTGATTCTGAAATTTTGTTGATAGAAACCCAGCACGTTGCGRATGTCG | [400] |
| confusum_GA_GC | TAGTGATTCTGAAATTTTGTTGATAGAAACCCAGCACGTTGCGGATGTCG | [400] |
| confusum_GA_EC | TAGTGATTCTGAAATTTTGTTGATAGAAACCCAGCACGTTGCGGATRTTG | [400] |
| confusum_TX_SJR | TAGTGATTCTGAAATTTTGTTGATAGAAACCCAGCACGTTGCAGATGTCG | [400] |
| confusum_TX_SR | TAGTGATTCTGAAATTTTGTTGATAGAAACCCAGCACGTTGCGGATGTCG | [400] |
| confusum_TX_Bayou | TAGTGATTCTGAAATTTTGTTGATAGAAACCCAGCACGTTGCGGATGTCG | [400] |
| definitum_PA_LC | TAGTGATTCTGAAATTTTGTTGATAGAAACCCAGCACGTTGCGGATATCG | [400] |
| definitum_SC_GC | TAGTGATTCTGAAATTTTGTTGATAGAAACCCAGCACGTTGCGGATATCG | [400] |
| dixiense_GA_WC | TAGTGATTCTGAAATTTTGTTGATAGAAACCCAGCATGTTGCGGATGCCG | [400] |
| dixiense_SC_LBC | TAGTGATTCTGAAATTTTGTTGATAGAAACCCAGCATGTTGCGGATGCCG | [400] |

| | | |
|---|---|---|
| dixiense_NC_QC | TAGTGATTCTGAAATTTTGTTGATAGAAACCCAGCATGTTGCGGATGCCG | [400] |
| dixiense_FL_CC | TAGTGATTCTGAAATTTTGTTGATAGAAACCCAGCATGTTGCGGATGCCG | [400] |
| fibrinflatum_PA_DR | TAGTGATTCTGAAATTTTGTTGATCGAAACCCAACACGTTGCGGATGTCG | [400] |
| fibrinflatum_ME_AR | TAGTGATTCTGAAATTTTGTTGATCGAAACCCAACACGTTGCGGATGTCG | [400] |
| fibrinflatum_GA_FR | TAGTGATTCTGAAATTTTGTTGATCGAAACCCAACACGTTGTGGATGTCG | [400] |
| haysi_AL_BCC3 | TAGTGATTCTGAAATTTTGTTGATTGAAACCCAGCACGTTGCGGATGTTG | [400] |
| haysi_TX_SJR | TAGTGATTCTGAAATTTTGTTGATTGAAACCCAGCACGTTGCGGATGTTG | [400] |
| infenestrum_NC_RR | TAGTGRTTCTGAAATTTTGTTGATAGAAACCCAGCACGTTGCGGATGTYG | [400] |
| infenestrum_SC_RBC | TAGTGATTCTGAAATTTTGTTGATAGAAACCCAGCACGTTGCGGATGTYG | [400] |
| jenningsi_TN_PR | TAGTGATTCTGAAATTTTGTTGATAGAAACCCAGCACGTTGCGGATGTTG | [400] |
| jenningsi_NC_ER | TAGTGATTCTGAAATTTTGTTGATAGAAACCCAGCACGTTGCGGATGTCG | [400] |
| jenningsi_SC_FC | TAGTGATTCTGAAATTTTGTTGATAGAAACCCAGCACGTTGCGRATGTCG | [400] |
| jenningsi_PA_BR | TAGTGATTCTGAAATTTTGTTGATAGAAACCCAGCACGTTGCGGATGTTR | [400] |
| jenningsi_GA_AR | TAGTGATTCTGAAATTTTGTTGATAGAAACCCAGCACGTTGCGGATGTTG | [400] |
| jonesi_FL_CC1 | TAGTGATTCTGAAATTTTGTTGATAGAAACCCAGCACGTTGCGGATGTCT | [400] |
| jonesi_AL_BCC | TAGTGATTCTGAAATTTTGTTGATAGAAACCCAGCATGTTGCGGATGTTG | [400] |
| jonesi_NC_CC | TAGTGATTCTGAAATTTTGTTGATAGAAACCCAGCATGTTGCGGATGTCG | [400] |
| jonesi_NC_QC | TAGTGATTCTGAAATTTTGTTGATAGAAACCCAGCATGTTGCGGATGTTG | [400] |
| jonesi_GA_WC | TAGTGATTCTGAAATTTTGTTGATAGAAACCCAGCATGTTGCGAATGTTG | [400] |
| krebsorum_NC_MC | TAGTGATTCTGAAATTATGCTGATAGAAACCCAACACGTTGCGGATGTCG | [400] |
| krebsorum_SC_CC2 | TAGTGATTCTGAAATTATGCTGATAGAAACCCAACACGTTGCGGATGTCG | [400] |
| lakei_PA_NC | TAGTGATTCTGAAATTTTGTTGATAGAAACCCAGCACGTTGCGGATGTYG | [400] |
| lakei_SC_BR | TAGTGACTCTGAAATTTTGTTGATAGAAACCCAGCACGTTGCGGATGTCG | [400] |
| lakei_FL_CR | TAGTGATTCTGAAATTTTGTTGATAGAAACCCAGCACGTTGCGGATGTCG | [400] |
| lakei_Taunt_8_MA_TR | TAGTGATTCTGAAATTTTGCTGATAGAAACCCAGCACGTTGCGGATGTTG | [400] |
| lakei_Taunt_9_MA_TR | TAGTGATTCTGAAATCTTGTTGATAGAAACCCAACACGTTGCGGATGTTG | [400] |
| luggeri_NWT | TAGTGATTCTGAAATTTTGTTGATAGAAACCCAACACGTTGCGGATGTCG | [400] |
| luggeri_NE_FR | TAGTGATTCTGAAATTTTGTTGATAGAAACCCAACACGTTGCGGATGTCG | [400] |
| luggeri_NC_HR | TAGTGATTCTGAAATTTTGTTGATAGAAACCCAACACGTTGCGGATGTCG | [400] |
| luggeri_KY_GR3 | TAGTGATTCTGAAATTTTGTTGATAGAAACCCAACACGTTGCGGATGTCG | [400] |
| 'notiale AL BC5+6' | TAGTGATTCTGAAATTTTGTTGATCGAAACCCAACACGTTGCGGATGTCG | [400] |
| notiale_VA_RR | TAGTGATTCTGAAATTTTGTTGATCGAAACCCAGCACGTTGCGGATGTCG | [400] |
| notiale_TN_CC | TAGTGATTCTGAAATTTTGTTGATCGAAACCCAGCACGTTGCGGATGTCG | [400] |
| notiale_SC_RBC | TAGTGATTCWGAAATTTTGTTGATCGAAACCCACCACGTTGCRGATGTCG | [400] |
| 'notiale AL BC6+6' | TAGTGATTCTGAAATTTTGTTGATCGAAACCCAGCACGTTGCGGATGTCG | [400] |

Appendix 1. (Cont.)

| **Taxa** | **Sequence** | **Base #** |
|---|---|---|
| nyssa_AL_BC | TAGTGATTCTGAAATTTTGTTGATAGAAACCCAGCACGTTGCGGATGTTG | [400] |
| nyssa_ME_AR | TAGTGATTCTGAAATTTTGTTGATAGAAACCCAGCACGTTGCGGATGTTG | [400] |
| nyssa_VA_RR | TAGTGATTCTGAAATTTTGTTGATAGAAACCCAGCACGTTGCGGATGTTG | [400] |
| nyssa_ME_PR | TAGTGATTCTGAAATTTTGTTGATAGAAACCCAGCACGTTGCGGATGTTG | [400] |
| nyssa_NC_TR | TAGTGATTCTGAAATTTTGTTGATAGAAACCCAGCACGTTGCGGATGTTG | [400] |
| ozarkense_MO_GR2 | TAGTGATTCTGAAATWCTGTTGATAGAAACCCARCACGTTGCGRATGTCG | [400] |
| ozarkense_MO_GR1 | TAGTGATTCTGAAATACTGTTGATAGAAACCCAGCACGTTGCGGATGTCG | [400] |
| penobsco_ME_PR1 | TAGTGATTCTGAAATTTTGCTGATAGAAACCCAGCACGTTGCGGATGTCG | [400] |
| penobsco_ME_PR2 | TAGTGATTCTGAAATTTTGTTGATAGAAACTCAGCACGTTGCGGATGTCG | [400] |
| podostemi_NC_TR | TAGTGATTCTGAAATTTTGCTGATAGAAACCCAGCACGTTGCGGATGTCT | [400] |
| podostemi_GA_AS | TAGTGATTCTGAAATTTTGTTGATAGAAACCCAGCACGTTGCGGATGTCA | [400] |
| podostemi_MS_BC | TAGTGATTCTGAAATTTTGCTGATAGAAACCCAGCACGTTGCGGATGTCA | [400] |
| podostemi_GA_CR | TAGTGATTCTGAAATTTTGYTGATAGAAACCCAGCACGTTGCGGATGTCA | [400] |
| remissum_NC_NR2 | TAGTGATTCTGAAATTTTGCTGATAGAAACCCAGCACGTTGCGGATGTCG | [400] |
| remissum_NC_NR1 | TAGTGATTCTGAAATTTTGCTGATAGAAACCCAGCACGTTGCAGATGTCG | [400] |
| remissum_NC_NR3 | TAGTGATTCTGAAATTTTGCTGATAGAGACCCAGCRCGTTGCGGATGTCG | [400] |
| 'snowi AL BC 4+6' | TAGTGATTTTGAAATTTTGTTGATCGAAACCCAGCACGTTGCGGATATCT | [400] |
| snowi_TN_CC | TAGTGATTCTGAAATTTTGTTGATCGAAACCCAGCACGTTGCGGATGTCG | [400] |
| 'snowi AL BC 4+4' | TAGTGATTCTGAAATTTTGTTGATCGAAACCCAACACGTTGCGGATGTCG | [400] |
| taxodium_GA_CC2 | TAGTGATTCTGAAATTTTGTTGATAGAAACCCAGCACGTTGCGGATGTCG | [400] |
| taxodium_FL_CR | TAGTGATTCTGAAATTTTGCTGATAGAAACCCAGCACGTTGCGGATGTCG | [400] |
| underhilli_AL_HC3 | TAGTGATTCTGAAATTTTGTTGATCGAAACCCAACACGTTGTGGATGTCG | [400] |
| underhilli_GA_FR | TAGTGATTCTGAAATTCTGTTGATCGAAACCCAACACGTTGCGGATGTCG | [400] |
| underhilli_GA_FS | TAGTGATTYTGAAATTTTGTTGATAGAAACCCARCACGTTKYGGATGTCG | [400] |
| | | |
| tuberosum | CGAAACATTCGATTTACTTGTTCACGATTTGCAACTATCACTGGTATTTG | [450] |
| verecundum | CGAAAAATTCGATTTACTTGTTCACGATTTGCAACTATCACTGGTATTTG | [287] |
| decimatum | CGAAAAATTCGATTTACCTGTTTACAATTTGCAACTATCACTGGTATTTG | [450] |

| | | |
|---|---|---|
| apricarium | CGAAAAATTCGATTTACTTGTTTACAATTTGCAACTATCACTGGTATTTG | [450] |
| reptans | CCAAAAATTCGATTTACTTGTTTACGATTTGCAACTATCACTGGTATTTG | [450] |
| anchist_AL_HC | CAAARAATTCGATTTACTTGTTTACGATTTGCAACTATCATTGGTATTTG | [450] |
| anchist_DE_DR | CAAAGAATTCGATATACTTGTTTACGATTTGCAACTATCATTGGTATTTG | [450] |
| anchist_ME_AR | CAAAGAATTCGATTTACTTGTTTACGATTTGCAACTATCATTGGTATTTG | [450] |
| anchist_NC_NR | CAAAGAATTCGATTTACTTGTTTACGATTTGCAACTATCATTGGTATTTG | [450] |
| anchist_ME_KR | CAAAGAATTCGATTTACTTGTTTACGATTTGCAACTATCATTGGTATTTG | [450] |
| aranti_GA_FS | CAAAGAGTTCGATTTACTTGTTTACGATTTGCAACTATCATTGGTATTTG | [450] |
| aranti_GA_AS | CAAAGAGTTCGATTTACTTGTTTACGATTTGCAACTATCATTGGTATTTG | [450] |
| aranti_AL_HC | CAAAGARTTCGATTTACTTGTTTACGATTTGCAACTATCATTGGTATTTG | [450] |
| aranti_SC_LR | CAAAGAATTCGATTTACTTGTTTACGATTTGCAACTATCATTGGTATTTG | [450] |
| chlorum_NC_GC3 | CAAAGAATTCGATTTACTTGTTTACGATTTGCAACTATCATTGGTATTTG | [450] |
| chlorum_NC_GC1 | CAAAGAATTCGATTTACTTGTTTACGATTTGCAACTATCATTGGTATTTG | [450] |
| chlorum_NC_GC4 | CAAAGAATTCGATTTACTTGTTTACAATTTGCAACTATCATTGGTATTTG | [450] |
| confusum_TN_LR | CAAAGAATTCCATTTACTTRTTTACGATTTGCAACTATCATTGGTATTTG | [450] |
| confusum_GA_GC | CAAAGAATTCCATTTACTTATTTACGATTTGCAACTATCATTGGTATTTG | [450] |
| confusum_GA_EC | CAAAGAATTCGATTTACTTGTTTACGATTTGCAACTATCATTGGTATTTG | [450] |
| confusum_TX_SJR | CAAAGAATTCGATTTACTTGTTTACAATTTGCAACTATCATTGGTATTTG | [450] |
| confusum_TX_SR | CAAAGAATTCGATTTACTTGTTTACGATTTGCAACTATCATTGGTATTTG | [450] |
| confusum_TX_Bayou | CWAAGAATTCGATTTACTTGTTTACGATTTGCAAYTATCATTGGTATTTG | [450] |
| definitum_PA_LC | CAAAGAATTCAATTTACTTGTTTACGATTAGCAACTATCATTGGTATTTA | [450] |
| definitum_SC_GC | CAAAGAATTCAATTTACTTGTTTACGATTAGCAACTATCATTGGTATTTA | [450] |
| dixiense_GA_WC | CAAAGAATTCGATTTACTTGTTTACGATTTGCAACTATCATTGGTATTTG | [450] |
| dixiense_SC_LBC | CAAAGAATTCGATTTACTTGTTTACGATTTGCAACTATCATTGGTATTTG | [450] |
| dixiense_NC_QC | CAAAGAATTCGATTTACTTGTTTACGATTTGCAACTATCATTGGTATTTG | [450] |
| dixiense_FL_CC | CAAAGAATTCGATTTACTTGTTTACGATTTGCAACTATCATTGGTATTTG | [450] |
| fibrinflatum_PA_DR | CAAAGAATTCGATTTACTTGTTTACGATTTGCAACTATCATTGGTATTTG | [450] |
| fibrinflatum_ME_AR | CAAAGAATTCGATTTACTTGTTTACGATTTGCAACTATCATTGGTATTTG | [450] |
| fibrinflatum_GA_FR | CCAAGAATTCGATTTACTTGTTTACGATTTGCAACTATCATTGGTATTTG | [450] |
| haysi_AL_BCC3 | CGAAGAATTCGATTTACTTGTTTACAATTTGCAACTATCATTGGTATTTG | [450] |
| haysi_TX_SJR | CGAAGAATTCGATTTACTTGTTTACAATTTGCAACTATCATTGGTATTTG | [450] |
| infenestrum_NC_RR | CAAAGAATTCGATTTACTTGTTTACGATTTGCAACTATCATTGGTATTTG | [450] |

Appendix 1. (Cont.)

| Taxa | Sequence | Base # |
|---|---|---|
| infenestrum_SC_RBC | CAAAGAATTCGATTTACTTGTTTACGATTTGCAACTATCATTGGTATTTG | [450] |
| jenningsi_TN_PR | CAAAGAATTCGATTTACTTGTTTACGATTTGCAACTATCATTGGTATTTG | [450] |
| jenningsi_NC_ER | CCAAGAATTCGATTTACTTGTTTACGATTTGCAACTATCATTGGTATTTG | [450] |
| jenningsi_SC_FC | CCAAGAATTCGATTTACTTGTTTACGATTTGCAACTATCATTGGTATTTG | [450] |
| jenningsi_PA_BR | CAAAGAATTCGATTTACTTGTTTACGATTTGCAACTATCATTGGTATTTG | [450] |
| jenningsi_GA_AR | CAAAGAATTCGATTTACTTGTTTACGATTTGCAACTATCATTGGTATTTG | [450] |
| jonesi_FL_CC1 | CAAAGAATTCGATTTACTTGTTTACAATTTGCAACTATCATTGGTATTTG | [450] |
| jonesi_AL_BCC | CAAAGAATTCGATTTACTTGTTTACGATTTGCAACTATCATTGGTATTTG | [450] |
| jonesi_NC_CC | CAAAGAATTCGATTTACTTGTTTACGATTTGCAACTATCATTGGTATTTG | [450] |
| jonesi_NC_QC | CAAAGAATTCGATTTACTTGTTTACGATTTGCAACTATCATTGGTATTTG | [450] |
| jonesi_GA_WC | CAAAGAATTCGATTTACTTGTATACGATTTGCAACTATCATTGGTATTTG | [450] |
| krebsorum_NC_MC | CAAAAAATTCGATTTACTTGTTTACGATTTGCAACTATCATTGGTATTTG | [450] |
| krebsorum_SC_CC2 | CAAAAAATTCGATTTACTTGTTTACGATTTGCAACTATCATTGGTATTTG | [450] |
| lakei_PA_NC | CAAAGAATTCCATTTACTTRTTTACGATTTGCAACTATCATTGGTATTTG | [450] |
| lakei_SC_BR | CAAAGAATTCKATTTACTTGTTTACGATTTGCAACTATCATTGGTATTTG | [450] |
| lakei_FL_CR | CAAAGAATTCGATTTACTTGTTTACAATTTGCAACTATCATTGGTATTTG | [450] |
| lakei_Taunt_8_MA_TR | CAAAGAATTCCATTTACTTGTTTACGATTTGCAACTATCATTGGTATTTG | [450] |
| lakei_Taunt_9_MA_TR | CAAAGAATTCGATTTACTTGTTTACGATTTGCAACTATCATTGGTATTTG | [450] |
| luggeri_NWT | CTAAGAATTCGATTTACTTGTTTACGATTTGCAACTATCATTGGTATTTG | [450] |
| luggeri_NE_FR | CTAAGAAATCGATTTACTTGTTTACGATTTGCAACTATCATTGGTATTTG | [450] |
| luggeri_NC_HR | CTAAGAATTCGATTTACTTGTTTACGATTTGCAACTATCATTGGTATTTG | [450] |
| luggeri_KY_GR3 | CTAAGAATTCGATTTACTTGTTTACGATTTGCAACTATCATTGGTATTTG | [450] |
| 'notiale AL BC5+6' | CCAAGAATTCGATTTACTTGTTTACGATTTGCAACTATCATTGGTATTTG | [450] |
| notiale_VA_RR | CAAAGAATTCGATTTACTTGTTTACGATTTGCAACTATCATTGGTATTTG | [450] |
| notiale_TN_CC | CAAAGAATTCGATTTACTTGTTTACGATTTGCAACTATCATTGGTATTTG | [450] |
| notiale_SC_RBC | CCAAGAATTCGATWTACTTGTTTACGATTTGCAACTATCATTGGTATTTG | [450] |
| 'notiale AL BC6+6' | CAAAGAATTCGATTTACTTGTTTACGATTTGCAACTATCATTGGTATTTG | [450] |
| nyssa_AL_BC | CCAAGAATTCGATTTACTTGTTTACGATTTGCAACTATCATTGGTATTTG | [450] |
| nyssa_ME_AR | CAAAGAATTCGATTTACTTGTTTACGATTTGCAACTATCATTGGTATTTG | [450] |
| nyssa_VA_RR | CAAAGAATTCGATTTACTTGTTTACGATTTGCAACTATCATTGGTATTTG | [450] |
| nyssa_ME_PR | CAAAGAATTCGATTTACTTGTTTACGATTWGCAACTATCATTGGTATTTG | [450] |
| nyssa_NC_TR | CAMAGAATTCGATTTACTTGTTTACGATTTGCAACTATCAYTGGTATTTG | [450] |
| ozarkense_MO_GR2 | CAAAGAATTCGATTTACTTGTTTACGATTTGCAACTATCATTGGTATTTG | [450] |

| | | |
|---|---|---|
| ozarkense_MO_GR1 | CAAARAATTCGATTTACTTGTTTACGATTTGCAACTATCATTGGTATTTG | [450] |
| penobsco_ME_PR1 | CSAAGAATTCTATTTACTTGTTTACGATTTGCAACTATCATTGGTATTTA | [450] |
| penobsco_ME_PR2 | CCAAGAATTCGATTTACTTGTTTACGATYTGCAACTATCATTGGTATTTA | [450] |
| podostemi_NC_TR | CGAAKAATTCGATTTACTTGTTTAYGATTTGCAACTATCATTGGTATATG | [450] |
| podostemi_GA_AS | CGAAGAATTCGATTTACTTGTTTACGATTTGCAACTATCATTGGTATTTG | [450] |
| podostemi_MS_BC | CGAAGAATTCGATTTACTTGTTTACGATTTGCAACTATCATTGGTATTTG | [450] |
| podostemi_GA_CR | CGAAGAATTCGATTTACTTGTTTACGATTTGCAACTATCATTGGTATTTG | [450] |
| remissum_NC_NR2 | CAAAGAATTCGATTTACTTGTTTACGATCTGCAACTATCATTGGTATTTA | [450] |
| remissum_NC_NR1 | CAAAGAATTCGATTTACTTGTTTACGATTTGCAACTATCATTGGTATTTA | [450] |
| remissum_NC_NR3 | CAAAGAATTCGATTTACTTGTTTACGATYTGCAACTATCATTGGTATTTA | [450] |
| 'snowi AL BC 4+6' | CACAGAATTCGATATACTTGTGTACGATTTGCACCTATCACTGGTATATG | [450] |
| snowi_TN_CC | CAAAGAATTCGATTTACTTGTTTACGATTTGCAACTATCATTGGTATTTG | [450] |
| 'snowi AL BC 4+4' | CAAAAAATTCGATTTACTTGTTTACGATTTGCAACTATCATTGGTATTTG | [450] |
| taxodium_GA_CC2 | CAAAGAATTCGATTTACTTGTTTACAATTTGCAACTATCATTGGTATTTG | [450] |
| taxodium_FL_CR | CAAAGAATTCGATTTACTTGTTTACGATTTGCAACTATCATTGGTATTTG | [450] |
| underhilli_AL_HC3 | CCAAGAATTCGATTTACTTGTTTACGATTTGCAACTATCATTGGTATTTG | [450] |
| underhilli_GA_FR | CCAAGAATTCGATTTACTTGTTTACGATTTGCAACTATCATTGGTATTTG | [450] |
| underhilli_GA_FS | CCAAGAATTCGATTTACTTGTTTACGATTTGCAACTATCATTGGTATTTG | [450] |

| | | |
|---|---|---|
| tuberosum | AAGCAGTACCTGGAATTCAACTCACCGATTGCGACCTACACGTGGAGCTT | [500] |
| verecundum | AAGCAGTACCTGCAGTTTGACWCACCGATTGCGACGTACACGTGGAGCTT | [337] |
| decimatum | AAGCAGTACCTGGAATTCAACATACCGATTGCGACTTACACGTGGAGCTT | [500] |
| apricarium | AAGCAGTACCTGGAATTCAACAAACCGATTGCGACTTACACGTGGAGTTT | [500] |
| reptans | AAGCAGTACCTGGAATTCAACACACCGATTGCGACTTACACGTGGAGCTT | [500] |
| anchist_AL_HC | AAGCAGTACCTGGAATTCAACACACCGATTGCGACTTATACGTGGAGCTT | [500] |
| anchist_DE_DR | AAGCAGTACCTGGAATTCAASACACCGATTGCGACTTATACGTGGAGCTT | [500] |
| anchist_ME_AR | AAGCAGTACCTGGAATTCAACWCACCGATTGCGACTTATACGTGGAGCTT | [500] |

Appendix 1. (Cont.)

| Taxa | Sequence | Base # |
|---|---|---|
| anchist_NC_NR | AAGCAGTACCTGGAATTCAACACACCGATTGCGACTTATACGTGGAGCTT | [500] |
| anchist_ME_KR | AAGCAGTACCTGGAATTCAACACACCGATTGCGACTTATACGTGGAGCTT | [500] |
| aranti_GA_FS | AAGCAGTACCTGGAATTCAGCATACCGATTGCGACTTACACGTGGAGCTT | [500] |
| aranti_GA_AS | AAGCAGTACCTGGAATTCAGCATACCGATTGCGACTTACACGTGGAGCTT | [500] |
| aranti_AL_HC | AAGCAGTACCTGGAATTCAGCATACCGATTGCGACTTACACGTGGAGCTT | [500] |
| aranti_SC_LR | AAGCAGTACCTGGAATTCAGCATACCGATTGCGACTTACACGTGGAGCTT | [500] |
| chlorum_NC_GC3 | AAGCAGTACCTGGAATTCAGCATACCGATTGCGACTTACACGTGGAGCTT | [500] |
| chlorum_NC_GC1 | AAGCAGTACCTGGAATTCAACAYACCAATTGCGACTTACACGTGGAGCTT | [500] |
| chlorum_NC_GC4 | AAGCAGTACCTGGAATTCAGCATACCGATTGCGACATACACGTGGAGCTT | [500] |
| confusum_TN_LR | AAGCAGTACCTGGAATTCARCATACCGATTGCGACYTAYACGTGGAGCTT | [500] |
| confusum_GA_GC | AAGCAATACCTGGAATTCAGCATACCGATTGCGACTTACACGTGGAGCTT | [500] |
| confusum_GA_EC | AAGCAGTTCCTGGAATTCAACATACCAATTGCGACTTACACGTGGAGCTT | [500] |
| confusum_TX_SJR | AAGCASTACCTGGAATTCAGCATACCGATTGCGACTTACACGTGGAGCTT | [500] |
| confusum_TX_SR | AAGCAGTACCTGGAATTCAGCATACCGATTGCGACTTACACGTGGAGCTT | [500] |
| confusum_TX_Bayou | AAGCAGTACCTGGAATTCAGCATACCGATTGCGACTTACACGTGGAGCTT | [500] |
| definitum_PA_LC | AAGCAGTACCTGGAATTCAGCATACCGATTGCGACGTACACGTGGAGCTT | [500] |
| definitum_SC_GC | AAGCAGTACCTGGAATTCAGCATACCGATTGCGACGTACACGTGGAGCTT | [500] |
| dixiense_GA_WC | AAGCAGTACCTGGAATTCAATACACCAATTGCGACTTATTCGTGGAGCTT | [500] |
| dixiense_SC_LBC | AAGCAGTACCTGGAATTCAATACACCRATTGCGACTTATTCGTGGAGCTT | [500] |
| dixiense_NC_QC | AAGCAGTACCTGGAATTCAATACACCGATTGCGACTTATTCGTGGAGCTT | [500] |
| dixiense_FL_CC | AAGCAGTACCTGGAATTCAATACACCRATTGCGACTTATTCGTGGAGCTT | [500] |
| fibrinflatum_PA_DR | AAGCAGTACCTGGAATTCAGCACACCGATTGCGACTTATACGTGGAGCTT | [500] |
| fibrinflatum_ME_AR | AAGCAGTACCTGGAATTCARCACACCGATTGCGACTTATACGTGGAGCTT | [500] |
| fibrinflatum_GA_FR | AAGCAGTACCTGGAATTCAACACGCCGATTGCGACTTATACGTGGAGCTT | [500] |
| haysi_AL_BCC3 | AAGCAGTACCTGGAATTCAGCATACCAATTGCAACTTACACGTGGAGCTT | [500] |
| haysi_TX_SJR | AAGCAGTACCYGGAATTCAGCATACCAATTGCAACTTACACGTGGAGCTT | [500] |
| infenestrum_NC_RR | AAGCAGTACCTGGAATTCAACACACCGATTGCGACTTATGCGTGGAGTTT | [500] |
| infenestrum_SC_RBC | AAGCAGTACCTGGAATTCAACACACCGATTGCGACTTATGCGTGGAGTTT | [500] |
| jenningsi_TN_PR | AAGCAGTACCTGGAATTCAACACACCGATTGCGACTTACACGTGGAGCTT | [500] |
| jenningsi_NC_ER | AAGCAGTACCTGGAATTCAACACACCGATTGCGACTTACACGTGGAGCTT | [500] |
| jenningsi_SC_FC | AAGCAGTACCTGGAATTCAACACACCGATTGCGACTTACACGTGGAGCTT | [500] |
| jenningsi_PA_BR | AAGCAGTACCTGGAATTCAACACACCGATTGCGACTTACACGTGGAGCTT | [500] |
| jenningsi_GA_AR | AAGCAGTACCTGGAATTCAACACACCGATTGCGACTTACACGTGGAGCTT | [500] |
| jonesi_FL_CC1 | AAGCAGTACCTGGAATTCAGCATCCCGATTGGGACGTACACGTGGAGCTT | [500] |
| jonesi_AL_BCC | AAACAGTACCTGGAATTCAGCAYACCGATTGCGACTTACACGTGGAGCTT | [500] |
| jonesi_NC_CC | AAGCAGTACCTGGAATTCAGCATACCGATTTCGACTTACACGTGGAGCTT | [500] |

| | | |
|---|---|---|
| jonesi_NC_QC | AAGCAGTACCTGGAATTCAGCATACCGATTTCGACTTACACGTGGAGCTT | [500] |
| jonesi_GA_WC | AAACAGTACCTGGAATTCAACACACCGATTGCGACTTACACGTGGAGCTT | [500] |
| krebsorum_NC_MC | AAGCAGTACCTGGAATTCAGCATACCGGTTGCGACTTACACGTGGAGCTT | [500] |
| krebsorum_SC_CC2 | AAGCAGTACCTGGAATTCAGCATACCGGTTGCGACTTACACGTGGAGCTT | [500] |
| lakei_PA_NC | AAGCAGTACCTGGAATTCAGCATACCGATTGCGACWTACACGTGGAGCTT | [500] |
| lakei_SC_BR | AAGCAGTACCTGGAATTCAGCATACCGATTGCGACTTACACGTGGAGCTT | [500] |
| lakei_FL_CR | AAGCAGTACCTGGAATTCARTATACCGATTGCGACTTACACGTGGAGCTT | [500] |
| lakei_Taunt_8_MA_TR | AAGCAGTACCTGGAATTCAGCATACCGATTGCGACTTACACGTGGAGCTT | [500] |
| lakei_Taunt_9_MA_TR | AAGCAGTACCTGGAATTCAACACACCAATTGCGACTTACACGTGGAGCTT | [500] |
| luggeri_NWT | AAGCAGTACCTGGAATTCAGCATACCGATTGCAACTTACACGTGGAGCTT | [500] |
| luggeri_NE_FR | AAGCAGTACCTGGAATTCAGCATACCGATTGCAACTTACACGTGGAGCTT | [500] |
| luggeri_NC_HR | AAGCAGTACCTGGAATTCAGCATACCGATTGCRACTTACACGTGGAGCTT | [500] |
| luggeri_KY_GR3 | AAGCAGTACCTGGAATTCAGCATACCGATTGCAACTTACACGTGGAGCTT | [500] |
| 'notiale AL BC5+6' | AAGCAGTACCTGGAATTCAACACACCGATTGCGACTTATACGTGGAGCTT | [500] |
| notiale_VA_RR | AAGCAGTACCTGGAATTCAGCACACCGATTGCGACTTATACGTGGAGCTT | [500] |
| notiale_TN_CC | AAGCAGTACCTGGAATTCAGCACACCGATTGCGACTTATACGTGGAGCTT | [500] |
| notiale_SC_RBC | AAGCAGTACCTGGAATTCAACACACCGATTGYGACTTATACGTGGAGCTT | [500] |
| 'notiale AL BC6+6' | AAGCAGTACCTGGAATTCAGCACACCGATTGCGACTTATACGTGGAGCTT | [500] |
| nyssa_AL_BC | AAGCAGTACCTGGAATTCAATACACCGATTGCGACTTATACGTGGAGCTT | [500] |
| nyssa_ME_AR | AAGCAGTACCTGGAATTCAACACACCGAATGCGACTTATACGTGGAGCTT | [500] |
| nyssa_VA_RR | AAGCAGTACCTGGAATTCAACACACCGATTGCGACTTATACGTGGAGCTT | [500] |
| nyssa_ME_PR | AAGCAGTACCTGGAATTYAACACACCGATTGCGACTTATACGTGGAGCTT | [500] |
| nyssa_NC_TR | AAGCASTACCTGGAATTCAACACACCGATTGCGACTTATACGTGGAGCTT | [500] |
| ozarkense_MO_GR2 | AAGCAGTACCTRGAATTCAGCATACCGATTGCGACTTACACGTGGAGCTT | [500] |
| ozarkense_MO_GR1 | AAGCAGTACCTGGAATTCAGCATACCGATTGCGACTTACACGTGGAGCTT | [500] |
| penobsco_ME_PR1 | AAGCAGTACCTGGAATTCAGCACACCGATTGCGACTTACACGTGGAGCTT | [500] |

Appendix 1. (Cont.)

| **Taxa** | **Sequence** | **Base #** |
|---|---|---|
| penobsco_ME_PR2 | AAACAGTACCTGGAATTCAGCACACCGATTGCGACTTACACGTGGAGCTT | [500] |
| podostemi_NC_TR | AAGCAGTACCTGGAATTCACCACACCGATTGCGACTTATACGTGGAGCTT | [500] |
| podostemi_GA_AS | AAGCAGTACCTGGAATTCACCACACCGATTGCGACTTATACGTGGAGCTT | [500] |
| podostemi_MS_BC | AAGCAGTACCTGGAATTCACCACACCGATTGCGACTTATACGTGGAGCTT | [500] |
| podostemi_GA_CR | AAGCAGTACCTGGAATTCACCACACCGATTGCGACTTATACGTGGAGCTT | [500] |
| remissum_NC_NR2 | AAGCAGTACYTGGAATTCAACACACCGATTGCGACTTACAYGTGGAGCTT | [500] |
| remissum_NC_NR1 | AAGCAGTACCTGGAATTCAACACACCGATTGCGACTTACACGTGGAGCTT | [500] |
| remissum_NC_NR3 | AAGCAGTACCTGGAATTCAACACACCGATTGCSACKTACACGTGGAGCTT | [500] |
| 'snowi AL BC 4+6' | AAGCACTACCTGGAATTCAGCACACCGATTGYGACTTATACGTGGAGCTT | [500] |
| snowi_TN_CC | AAGCAGTACCTGGAATTCAGCACACCGATTGCGACTTATACGTGGAGCTT | [500] |
| 'snowi AL BC 4+4' | AAGCAGTACCTGGAATTCAGCACACCGATTGCGACTTATACGTGGAGCTT | [500] |
| taxodium_GA_CC2 | AAGCAGTACCTGGAATTCAGYAYACCGATTGCGACTTACACGTGGAGCTT | [500] |
| taxodium_FL_CR | AAGCASTACCTGGAATTCAGCAYACCGATTGCGAYTTACACGTGGAGCTT | [500] |
| underhilli_AL_HC3 | AAGCAGTACCTGGAATTCAACACRCCGATTGCGACTTATACGTGGAGCTT | [500] |
| underhilli_GA_FR | AAGCAGTACCTGGAATTCAGCACACCGATTGCGACTTATACGTGGAGCTT | [500] |
| underhilli_GA_FS | AAGCAGTACCTGGAATTCARCACRCCGATTGCGACTTATACGTGGAGCTT | [500] |

| | | |
|---|---|---|
| tuberosum | TGCGAATGGAAAACTTTTGCACATTTTACTGGTCGATGGGGAGCTTCAAT | [550] |
| verecundum | TGCAAATGGAAAACTATTGCACATTTTGCTGGCCGACGGAACTTTCCACT | [387] |
| decimatum | TGCAAACGGAAAACTCTTGCACATTTTGCTGGCCGATGGAACGCTTCAGT | [550] |
| apricarium | TGCGAACGGAAAACTCTTGCACATTTTGCTGGCCGACGGAACACTCCAGT | [550] |
| reptans | TGCGAACGGAAAACTCTTGCACATTTTGCTGGAGGACGGAACGCTTCAGT | [550] |
| anchist_AL_HC | TGCGAACGGGAAGCTCTTGCATATTTTGCTCGCCGACGGAACGTTCCAGT | [550] |
| anchist_DE_DR | TGCGAACGSGAAGCTCTTGCATATTTTGCTCGCCGACGGAACGTTCCAGT | [550] |
| anchist_ME_AR | TGCGAACGGGAAGCTCTTGCATATTTTGCTCGCCGACGGAACGTTCCAGT | [550] |
| anchist_NC_NR | TGCGAACGGGAAGCTCTTGCATATTTTGCTCGCCGACGGAACGTTCCAGT | [550] |
| anchist_ME_KR | TGCGAACGGGAAGCTCTTGCATATTTTGCTCGCCGACGGAACGTTCCAGT | [550] |
| aranti_GA_FS | TGCAAACGGAAAACTCTTGCATATTTTACTGGCCGACGGAACATTTCAGT | [550] |
| aranti_GA_AS | TGCAAACGGAAAACTCTTGCATATTTTACTGGCCGACGGAACATTTCAGT | [550] |
| aranti_AL_HC | TGCAAACGGAAAACTCTTGCATATTTTACTGGCCGACGGAACATTYCAGT | [550] |
| aranti_SC_LR | TGCAAACGGAAAACTCTTGCATATTTTACTGGCCGACGGAACATTTCAGT | [550] |
| chlorum_NC_GC3 | TGCAAACGGGAAGCTCTTGCATATTTTGCTGGCTGACGGAACATTCCAGT | [550] |
| chlorum_NC_GC1 | TGCAAACGGGAAGCTCTTGCATATTTTRCTGGCYGACGGAACATTCCAGT | [550] |
| chlorum_NC_GC4 | TGCAAACGGGAAGCTCTTGCATATTTTACTGGCCGACGGAACATTCCAGT | [550] |
| confusum_TN_LR | TGCAAACGGGAAGCTCTTGCATGTTTTRCTSGCYGACGGAACRTTCCAGT | [550] |
| confusum_GA_GC | TTCAAACGGGAAGCTCTTGCATATTTTACTGGCCGACGGAACATTCCAGT | [550] |
| confusum_GA_EC | TGCGAACGGGAAACTCTTGCATATTTTRCTGGCCGACGGAACATTCCAGT | [550] |

| | | |
|---|---|---|
| confusum_TX_SJR | TGCAAACGGAAAACTCTTGCATATTTTACTGGCCGACGGAACATTCCAST | [550] |
| confusum_TX_SR | TGCGAACGGAAAACTCTTGCATATTTTGCTCGCCGACGGAACATTCCAGT | [550] |
| confusum_TX_Bayou | TGCAAACGGGAAGCTCTTGCATATTTTRCTGGCCGACGGAACRTTCCAGT | [550] |
| definitum_PA_LC | TGCGAACGGAAAACTCTTGCATATTTTACTGGCCGACGGAACATTCCAGT | [550] |
| definitum_SC_GC | TGCGAACGGAAAACTCTTGCATATTTTACTGGCCGACGGAACATTCCAGT | [550] |
| dixiense_GA_WC | TGCAAACGGAAAACTCCTTCATATTTTGCTGGCTGACGGAACATTCCAGT | [550] |
| dixiense_SC_LBC | TGCAAACGGAAAACTCCTTCATRTTTTGCTGGCTGACGGAACATTCCAST | [550] |
| dixiense_NC_QC | TGCAAACGGAAAACTCCTTCATATTTTGCTGGCTGACGGAACATTCCAGT | [550] |
| dixiense_FL_CC | TGCAAACGGAAAACTCCTTCATATTTTGCTGGCTGACGGAACATTCCAGT | [550] |
| fibrinflatum_PA_DR | TGCGAACGGGAAGCTCTTGCATATTTTGCTGGCCGACGGAACATTCCAGT | [550] |
| fibrinflatum_ME_AR | TGCGAAYGGGAAGCTCTTGCATATTTTGCTCACCGAYGGAACATTCCAGT | [550] |
| fibrinflatum_GA_FR | TGCGAACGGGAAGCTCTTGCATATTCTGCTAACCGACGGAACATTCCAGT | [550] |
| haysi_AL_BCC3 | TGCGAATGGAAAACTCTTGCAYATTTTGCTGGCCGATGGAACATTCCAGT | [550] |
| haysi_TX_SJR | TGCGAATGGAAAACTCTTGCACATTTTGCTGGCCGATGGAACATTCCAGT | [550] |
| infenestrum_NC_RR | TGCGAACGGGAAGCTCTTGCATATTTTACTGGCCGACGGAACATTCCAGT | [550] |
| infenestrum_SC_RBC | TGCGAACGGGAAGCTCTTGCATATTTTACTGGCCGACGGAACATTCCAGT | [550] |
| jenningsi_TN_PR | TGCGAACGGGAAGCTCTTGCATATTTTGCTGGCCGACGGAACATTCCAGT | [550] |
| jenningsi_NC_ER | TGCGAACGGGAAGATCTTGCATATTTTGCTGGCCGACGGAACATTTCAGT | [550] |
| jenningsi_SC_FC | TGCGAACGGGAAGCTCTTGCATATTTTGCTGGCCGACGGAACATTCCAGT | [550] |
| jenningsi_PA_BR | TGCGAACGGGAAGCTCTTGCATATTTTGCTGGCCGACGGAAYATTCCAGT | [550] |
| jenningsi_GA_AR | TGCGAACGGGAAGMTCTTGCATATTTTGCTGGCCGACGGAACATTCCAGT | [550] |
| jonesi_FL_CC1 | TGCAAACGGGAAGCTCTTGCATATTTTGCTTGCCGACGGAACATTCCAGT | [550] |
| jonesi_AL_BCC | TGCGAACGGAAAGCTCTTGCATATTTTGCTSGCCGAYGGAACATTCCAGT | [550] |

Appendix 1. (Cont.)

| Taxa | Sequence | Base # |
|---|---|---|
| jonesi_NC_CC | TGCGAACGGAAAACTYTTGCATATTTTRCTGGCCGACGGAACATTCCAGT | [550] |
| jonesi_NC_QC | TGCGAACGGRAARCTCTTGCATATTTTRCTGGCCGATGGAACATTCCAGT | [550] |
| jonesi_GA_WC | TGCGAACGGAAAACTCTTGCATATTTTACTGGCCGACGGAACATTCCAGT | [550] |
| krebsorum_NC_MC | TGCCAACGGGAAGCTCTTGCATATTTTGCTCGCTGATGGAACATTCCAGT | [550] |
| krebsorum_SC_CC2 | TGCCAACGGGAAGCTCTTGCATATTTTGCTCGCTGATGGAACATTCCAGT | [550] |
| lakei_PA_NC | TTCAAACGGGAAGCTCTTGCATATTTTRCTGGCCGACGGAACATTCCAGT | [550] |
| lakei_SC_BR | TGCAAACGGGAAGCTCTTGCATATTTTGCTGGCCGACGGAACATTCCAGT | [550] |
| lakei_FL_CR | TGCRAACGGGAARCTCTTGCATATTTTGCTSGCCGACGGAACATTCCAGT | [550] |
| lakei_Taunt_8_MA_TR | TGCGAACGGGAAGCTCTTGCATATTTTACTGGSCGACGGAACATTCCAGT | [550] |
| lakei_Taunt_9_MA_TR | TGCAAACGGGAAGCTCTTGCATATTTTACTGGCCGACGGAACATTCCAGT | [550] |
| luggeri_NWT | TGCAAACGGAAAACTCTTGCATATTTTGCTGGCTGACGGAACATTCCAGT | [550] |
| luggeri_NE_FR | TGCAAACGGAAAACTCTTGCATATTTTGCTGGCTGACGGAACATTCCAGT | [550] |
| luggeri_NC_HR | TGCAAACGGAAAACTCTTGCATATTTTGCTGGCTGACGGAACATTCCAGT | [550] |
| luggeri_KY_GR3 | TGCAAACGGAAAACTCTTGCATATTTTGCTGGTTGACGGAACATTCCAGT | [550] |
| 'notiale AL BC5+6' | TGGGAACGGGAAGCTCTTGCATATTTTGCTCACCAACGGAACATTCCAGT | [550] |
| notiale_VA_RR | TGCGAATGGGAAGCTCTTGCATATTCTGCTCACCGACGGAACATTCCAGT | [550] |
| notiale_TN_CC | TGCGAACGGGAAGCTCTTGCATATTTTGCTCACCGACGGAACATTCCAGT | [550] |
| notiale_SC_RBC | YGCGAACGGGAAGCTCTTGCATATTYTGCTCACCGACGGAACATTCCAGT | [550] |
| 'notiale AL BC6+6' | TGCGAATGGGAAGCTCTTGCATATTTTGCTCACCGACGGAACATTCCAGT | [550] |
| nyssa_AL_BC | TGCGAACGGGAAGCTCTTGCATATTTTGCTCGCCGACGGAACGTTCCAGT | [550] |
| nyssa_ME_AR | TGCGAACGGGAAGCTCTTGCATATTTTGCTCGCCGACGGAACGTTCCAGT | [550] |
| nyssa_VA_RR | TGCGAACGGGAAGCTCTTGCATATTTTGCTCGCCGACGGAACGTTCCAGT | [550] |
| nyssa_ME_PR | TGCGAACGGGAAGCTCTTGCATATTTTGCTCGCCGACGGAACGTTCCAGT | [550] |
| nyssa_NC_TR | TGCGAACGGGAAGCTCTTGCATATTTTGCTCKCCGACGGAAYGTTCCAST | [550] |
| ozarkense_MO_GR2 | TGCAAACGGGAAGCTCTTGCATATTTTGCTGGCCGACGGAACATTCCAGT | [550] |
| ozarkense_MO_GR1 | TACAAGCGGAAAGCTCTTGCATATTTTGCTGGCCGACGGAACATTCCAGT | [550] |
| penobsco_ME_PR1 | TGCAAACGGAAAACTCTTGCATATTTTACTGGCTGACGGAACATTCCAGT | [550] |
| penobsco_ME_PR2 | TTCAAACGGAAAACTCTTGCATATTTTACTGGCTGACGGAACATTCCAGT | [550] |
| podostemi_NC_TR | TGCGAACGGAAAACTCTTGCATATTTTGCTGGCCGACGGAACATTCCAGT | [550] |
| podostemi_GA_AS | TGCGAACGGAAAACTCTTGCATATTTTGCTGGCCGACGGATCATTCCAGT | [550] |
| podostemi_MS_BC | TGCGAACGGAAAACTCTTGCATATTTTGCTGGCCGACGGATCATTCCAGT | [550] |
| podostemi_GA_CR | TGCGAACGGAAAACTCTTGCATATTTTGCTGGCCGACGGATCATTCCAGT | [550] |
| remissum_NC_NR2 | TGCAAACGGAAAACTCTTGCATATTTTACTGGCTGACGGAACATTCCAGT | [550] |
| remissum_NC_NR1 | TGCAAACGGAAAACTCTTGCATATTTTACTGGCTGACGGAACATTCCAGT | [550] |
| remissum_NC_NR3 | TGCAAACGGAAAACTCTTGCATATTTTACTGGCTGACGGAACATTCCAGT | [550] |
| 'snowi AL BC 4+6' | TGCGAATGGGAAGCTCTTGCATATTTTGCTCWCCGACGGAACATTCCAGT | [550] |
| snowi_TN_CC | TGCGAATGGGAAGCTCTTGCATATTTTGCTCACCGACGGAACATTCCAGT | [550] |
| 'snowi AL BC 4+4' | TGCGAACGGGAAGCTTTTGCATATTTTGCTGGCCGACGGAACATTCCAGT | [550] |
| taxodium_GA_CC2 | TGCAAACGGGAAGCTCTTGCATATTTTRCTGGCCGACGGAACATTCCAGT | [550] |
| taxodium_FL_CR | TGCRAAYGGAAAACTCTTGCATATTTTRCTSGCCGACGGAACATTCCAGT | [550] |
| underhilli_AL_HC3 | YGCGAACGGGAAGCTCTTGCATATTCTGCTMACCGACGGAACATTCCAGT | [550] |
| underhilli_GA_FR | TGCGAATGGGAAGCTCTTGCATATTTTGCTGACCGACGGAACATTCCAGT | [550] |

| | | |
|---|---|---|
| underhilli_GA_FS | TGCGAAYGGGAAGCTYTTGCATATTYTGCTMACCGACGGAACATTCCAGT | [550] |
| tuberosum | CCATAAAGTGGGAATTGGACGTGAATCGGTCGTGGGGATACACAGAGACT | [600] |
| verecundum | CCGTGAAGTGGGAATTAGAGGTGAATCGGTCGTGGGGATACACAGCTACT | [437] |
| decimatum | CCATAAAGTGGGAATTGGATGTGAATCGTTCGAGCGGATTTACAGCAATT | [600] |
| apricarium | CCATAAAGTGGGAATTGGATGTGAATCGATCGTGGGGATACACAGCGACT | [600] |
| reptans | CCATAAAGTGGGAATTGGATGTGAATCGAACGTGGGGATACACAGTGATT | [600] |
| anchist_AL_HC | CTATAAAGTGGGAATTRGATGTAAATCGGTCGTGGGGATACACAGCCACT | [600] |
| anchist_DE_DR | CTATAAAGTGGGAATTGGATGTAAATCGGTCGTGGGGATACACAGCCACT | [600] |
| anchist_ME_AR | CTATAAAGTGGGAATTGGATGTAAATCGGTCGTGGGGATACACAGCCACT | [600] |
| anchist_NC_NR | CTATAAAGTGGGAATTGGAYGTAAAYCGGTCGTGGGGATACACAGCCACT | [600] |
| anchist_ME_KR | CTATAAAGTGGGAATTGGATGTAAATCGGTCRTGGGGATACACAGCCACT | [600] |
| aranti_GA_FS | CCATAAAGTGGGAATCGGATGTTAATCGGTCGTGGGGATACACAGCCACT | [600] |
| aranti_GA_AS | CCATAAAGTGGGAATCGGATGTTAATCGGTCGTGGGGATACACAGCCACT | [600] |
| aranti_AL_HC | CCATAAAGTGGGAATCGGATGTTAATCGGTCGTGGGGATACACAGCCACT | [600] |
| aranti_SC_LR | CCATAAAGTGGGAATCGGATGTTAATCGGTCGTGGGGATACACAGCCACT | [600] |
| chlorum_NC_GC3 | CCATAAAGTGGGAACTGGATGTTAATCGGTCGTGGGGATACACAGCCACT | [600] |
| chlorum_NC_GC1 | CCATAAAGTGGGAATTGGACRTTAAYCGATCGTGGGGATACACAGCCATT | [600] |

Appendix 1. (Cont.)

| Taxa | Sequence | Base # |
|---|---|---|
| chlorum_NC_GC4 | CCATAAAGTGGGAATTGGATGTTAATMGGTCGTGGGGATACACAGCCACT | [600] |
| confusum_TN_LR | CCATAAARTGGGAATTGGATGTYAATCGGTCGTGGGGATACACAGCCATT | [600] |
| confusum_GA_GC | CCATAAAGTGGGAATTGGATGTTAATCGGTCGTGGGGATACACAGCCACY | [600] |
| confusum_GA_EC | CCATTAAGTGGGAATTGGATGTTAATCGATCGTGGGGATACACAGCCACT | [600] |
| confusum_TX_SJR | CCATAAAGTGGGAATTGGATRTCAATCGGTCGTKGGGATACACASCCACT | [600] |
| confusum_TX_SR | CCATAAAGTGGGAATTGGATGTCAATCGGTCGTTGGGATACACAGCCACT | [600] |
| confusum_TX_Bayou | CCATAAAGTGGGAATTGGACGTYAATCGGTCGTGGGGATACACAGCCACT | [600] |
| definitum_PA_LC | CCATAAAGTGGGAATCGGATGTTAATCGATCGTGGGGTTACACAGCCACT | [600] |
| definitum_SC_GC | CCATAAAGTGGGAATCGGATGTTAATCGGTCGTGGGGTTACACAGCCACT | [600] |
| dixiense_GA_WC | CTATAAAGTGGGAAATGGATGTTAATCGATCCTGTGGATACACAGTGATT | [600] |
| dixiense_SC_LBC | CTATAAAGTGGGAAATGGATGTTAATCGATCCTGTGGATACACAGTGATT | [600] |
| dixiense_NC_QC | CTATAAAGTGGGAAATGGATGTTAATCGATCCTGTGGATACACAGTGATT | [600] |
| dixiense_FL_CC | CTATAAAGTGGGAAATGGATGTTAATCGATCCTGTGGATACACAGTGATT | [600] |
| fibrinflatum_PA_DR | CCATAAAGTGGGAATTGGAYGTTAATCGGTCGTGGGGWTACACAGCCACT | [600] |
| fibrinflatum_ME_AR | CCAYAAAGTGGGAATTGGACGTTAACCGCTCGTGGGGATACACAGCCAYT | [600] |
| fibrinflatum_GA_FR | CCACAAAGTGGGAATCGGACGTTAACCGCTCGTGGGGATACACAGCCACT | [600] |
| haysi_AL_BCC3 | CCATAAAATGGGAATCGGACGTTAATCGGTCGTGGGGATACACAGCCACT | [600] |
| haysi_TX_SJR | CCATAAAATGGGAATCGGACGTTAATCGGTCGTGGGGATACACAGCCACT | [600] |
| infenestrum_NC_RR | CCATAAAGTGGGAATYGGAYGTTAAYCGGTCGTGGGGATACACAGCYACT | [600] |
| infenestrum_SC_RBC | CCATAAAGTGGGAATCGGAYGTTAATCGGTCGTGGGGATACACAGCTACT | [600] |
| jenningsi_TN_PR | CCATAAAGTGGGAATTAGATGTTAATCGGTCGTGGGGATACACAGTCACT | [600] |
| jenningsi_NC_ER | CCATAAAGTGGGAATTGGATGTAAATCGGTCGTGGGGATACACAGTCACT | [600] |
| jenningsi_SC_FC | CCATAAAGTGGGAATTGGATRTAAATCGGTCGTGGGGATACACAGTCACT | [600] |
| jenningsi_PA_BR | CCATAAAGTGGGAATTGGATGTAAATCGGTCATGGGGATACACAGCTACT | [600] |
| jenningsi_GA_AR | CCATAAAGTGGGAATTGGATGTAAATCGGTCGTGGGGATACACAGTCACT | [600] |
| jonesi_FL_CC1 | CCATAAAGTGGGAATTGGATGTCAATCGTTCGTGGGGATACACAGCCATT | [600] |
| jonesi_AL_BCC | CCATAAAGTGGGAATTGGAYGTTAATCGGTCGTCGGGATACACAGCCACT | [600] |
| jonesi_NC_CC | CCATAAAGTGGGAATTGGACGTTAAYCGGTCGTGGGGATACACAGCCACT | [600] |
| jonesi_NC_QC | CCATAAAGTGGGAATTGGATGTTAATCGGTCGTGGGGATACACAGCCACK | [600] |
| jonesi_GA_WC | CCATAAAGTGGGAATTGGACGTTAACCGGTCGTGGGGATACACAGCCACT | [600] |
| krebsorum_NC_MC | CCATAAAGTGGGAATTGGATGTTAATCGGTCGTGGGGATACACAGCCATC | [600] |
| krebsorum_SC_CC2 | CCATAAAGTGGGAATTGGATGTTAATCGGTCGTGGGGATACACAGCCATC | [600] |
| lakei_PA_NC | CCATAAAGTGGGAATTGGATGTTAATCGGTCGTGGGGATACACAGCCACT | [600] |
| lakei_SC_BR | CCATAAAGTGGGAATTGGATGTTAATCGGTCGTGGGGATACACAGCCACT | [600] |
| lakei_FL_CR | CCATAAAGTGGGAATTGGATGTTAATCGGTCGTGGGGATACACARCCACT | [600] |
| lakei_Taunt_8_MA_TR | CCATAAAGTGGGAATTGGATGTTAATCGGTCGTGGGGATACACAGCCACT | [600] |
| lakei_Taunt_9_MA_TR | CCATTAAGTGGGAATTGGACATTAACCGATCGTGGGGWTACACAGCCATT | [600] |
| luggeri_NWT | CCATAAAGTGGGAATTGGACGTTAATCGGTCGTGGGGATACACAGCAACT | [600] |
| luggeri_NE_FR | CCATAAAGTGGGAATTGGACGTTAATCGGTCGTGGGGATACACAGCAACT | [600] |
| luggeri_NC_HR | CCATAAAGTGGGAATTGGACGTTAATCGGTCGTGGGGATACACAGCAACT | [600] |
| luggeri_KY_GR3 | CCATAAAGTGGGAATTGGACGTTAATCGGTCGTGGGGATACACAGCAACT | [600] |
| 'notiale AL BC5+6' | CCATAAAGTGGGAATTGGACGTTAACCGCTCGTGGGGTTACCCAGCCATT | [600] |
| notiale_VA_RR | CCATAAAGTGGGAATTGGACGTTAACCGCTCGTGGGGTTACACAGCCATT | [600] |
| notiale_TN_CC | CCATAAAGTGGGAATTGGACGTTAACCGCTCGTGGGGATACACAGCCACT | [600] |
| notiale_SC_RBC | CYATAAARTGGGAATTGGACGTTAACCGCTCGTGGGGTTACACAGCCAYT | [600] |

| | | |
|---|---|---|
| 'notiale AL BC6+6' | CCATAAAGTGGGAATTGGACGTTAACCGCTCGTGGGGTTACACAGCCATT | [600] |
| nyssa_AL_BC | CTATAAAATGGGAATTGGATGTAAATCGGTCGTGGGGATACACAGCCACT | [600] |
| nyssa_ME_AR | CTATAAAGTGGGAATTGGATGTAAATCGGTCGTGGGGATACACAGCYACT | [600] |
| nyssa_VA_RR | CTATAAAGTGGGAATTGGATGTAAATCGGTCGTGGGGATACACAGCCACT | [600] |
| nyssa_ME_PR | CTATAAAGTGGGAATTGGATGTAAATCGGTCGTGGGGATAYACAGCYACT | [600] |
| nyssa_NC_TR | CTATAAAGTGGGAATTGGATGTAAATCGGTCGTGGGGATACACAGCCACT | [600] |
| ozarkense_MO_GR2 | CCATAAAGTGGGAATTGGACGTTAACCGGTCGTGGGGATACACAGCCACT | [600] |
| ozarkense_MO_GR1 | CCATAAAGTGGGAATTGGACGTTAATCGGTCGTGGGGATACACAGCCACT | [600] |
| penobsco_ME_PR1 | CCATAAAGTGGGAATTGGACGTTAACCGGTCGTGGGGATACACAGCCACT | [600] |
| penobsco_ME_PR2 | CCATCAAGTGGGAATTGGACGTTAACCGGTCGTGGGGATACACAGCCACT | [600] |
| podostemi_NC_TR | CAATAAAATGGGAATTGGATGTAAATCGGTCGTGGGGATACACAGCCATT | [600] |
| podostemi_GA_AS | CCATAAAATGGGAATTGGATGTAAATCGGTCGTGGGGATACACAGCCATT | [600] |
| podostemi_MS_BC | CCATAAAATGGGAATTGGATGTAAATCGGTCGTGGGGATACACAGCCATT | [600] |
| podostemi_GA_CR | CCATAAAATGGGAATTGGATGTAAATCGGTCGTGGGGATACACAGCCATT | [600] |
| remissum_NC_NR2 | CCATAAAATGGGAATTGGACGTTAACCGGTCGTGGGGATACACAGCCACT | [600] |
| remissum_NC_NR1 | CCATAAAATGGGAATTGGACGTTAACCGGTCGTGGGGATACACAGCCACT | [600] |
| remissum_NC_NR3 | CCATAAAGTGGGAAKTGGACGTTAACCGGTCGTGGGGATACACAGCCACT | [600] |

Appendix 1. (Cont.)

| Taxa | Sequence | Base # |
|---|---|---|
| 'snowi AL BC 4+6' | CCATAAAGTGGGAATTGGACGTTAACCGCTCGTGGGGTTACACAGCCATT | [600] |
| snowi_TN_CC | CCATAAAGTGGGAATTGGACGTTAACCGCTCGTGGGGTTACACAGCCATT | [600] |
| 'snowi AL BC 4+4' | CCATAAAGTGGGAATTGGATGTTAATCGGTCGTGGGGATACACAGCCACT | [600] |
| taxodium_GA_CC2 | CCATAAAGTGGGAATTGGATGTTAATCGGTCGTGGGGATACACAGCCACT | [600] |
| taxodium_FL_CR | CCATAAAGTGGGAATTGGATGTTAATCGGTCGTGGGGATACACAGCCACT | [600] |
| underhilli_AL_HC3 | CCATAAAGTGGGAATYGGACGTTAACCGCTCGTGGGGATACACAGCCACT | [600] |
| underhilli_GA_FR | CCATAAAGTGGGAATTGGATGTTAATCGGTCGTGGGGATACACAGCCACT | [600] |
| underhilli_GA_FS | CCAYAAAGTGGGAATYGGACGTTAACCGCTYGTGGGGDTACACAGCCMYT | [600] |

| | | |
|---|---|---|
| tuberosum | GACGAAGGTGTGGTGGCAGTAATTGACGGTTCAGACGTTTTGCTGACCAA | [650] |
| verecundum | GACGAAGGTGTGGTAGCAGTCATAGACGGGTCTGACGTACTGCTGACCAA | [487] |
| decimatum | GACGAAGCTGTTGTTGCAGTTATTGACGGTTCTGACGTTCTGCTGACAAA | [650] |
| apricarium | GACGAAGGTGTTGTTGCAGTTATTGACGGTTCTGACGTTCTGCTGACCAA | [650] |
| reptans | GACGAAGGTGTTGTTGCAGTCATTGACGGTGCTGACGTYCTGCTGACCAA | [650] |
| anchist_AL_HC | GACGAAGGTGTTGTTGCGGTTATTGATGGTTCTGACGTTCTGTTGACCAA | [650] |
| anchist_DE_DR | GACGAAGGTGTTGTTGCAGTTATTGATGGTTCTGACGTTCTGTTGACCAA | [650] |
| anchist_ME_AR | GACGAAGGTGTTGTTGCAGTTATTGATGGTTCTGACGTTCTGTTGACCAA | [650] |
| anchist_NC_NR | GACGAAGGTGTTGTTGCAGTTATTGATGGTTCTGACGTTCTGTTGACCAA | [650] |
| anchist_ME_KR | GACGAAGGTGTTGTTGCAGTTATTGATGGTTCTGACGTTCTGTTGACCAA | [650] |
| aranti_GA_FS | GACGAAGGTGTTGTTGCAGTTATTGATGGTTCTGACGTTTTGTTGACTAA | [650] |
| aranti_GA_AS | GACGAAGGTGTTGTTGCAGTTATTGATGGTTCTGACGTTTTGTTGACTAA | [650] |
| aranti_AL_HC | GACGAAGGTGTTGTTGCAGTTATTGATGGTTCTGACGTTTTGTTGACTAA | [650] |
| aranti_SC_LR | GACGAAGGTGTTGTTGCAGTTATTGATGGTTCTGACGTTTTGTTGACTAA | [650] |
| chlorum_NC_GC3 | GACGAAGGTGTKGTTGCAGTTATTGACGGTTCTGACGTTCTGCTGACCAA | [650] |
| chlorum_NC_GC1 | GACGAAGGTGTYGTTGCAGTTATTGACGGTTCTGACGTTCTGCTGACCAA | [650] |
| chlorum_NC_GC4 | GACGAAGGTGTTGTTGCAGTTATTGACGGTTCTGACGTTCTGTTGACCAA | [650] |
| confusum_TN_LR | GACGAAGGTGTTGTTGCAGTTATTGACGGTTCTGACGTTCTGTTGWCCAA | [650] |
| confusum_GA_GC | GACGAAGGTGTTGTTGCAGTTATTGACGGTTCTGACGTTCTGTTGACCAA | [650] |
| confusum_GA_EC | GACGAAGGTGTTGTTGCAGTTATTGACGGTTCTGACRTTCTGCTGACCAA | [650] |
| confusum_TX_SJR | GACGAAGGTGTTGTTGCAGTTATTGACGGTTCTGACGTTCTGTTGACCAA | [650] |
| confusum_TX_SR | GACGAAGGTGTTGTTGCAGTTATTGACGGTTCTGACGTTCTGTTGACCAA | [650] |
| confusum_TX_Bayou | GACGAAGGTGTTGTTGCAGTTATTGACGGTTCTGACGTTCTGCTGACCAA | [650] |
| definitum_PA_LC | GACGAAGGTGTTGTTGCAGTTATTGACGGCTCCGACGTTCTGTTGACCAA | [650] |
| definitum_SC_GC | GACGAAGGTGTTGTTGCAGTTATTGACGGCTCCGACGTTCTGTTGACCAA | [650] |
| dixiense_GA_WC | GACGAAGGCGTTGTTGCAGTTATTGACRGTTCTGACGTTCTGCTGACCAA | [650] |
| dixiense_SC_LBC | GACGAAGGCGTTGTTGCAGTTATTGACGGTTCTGACGTTCTGCTGACCAA | [650] |
| dixiense_NC_QC | GACGAAGGCGTTGTTGCAGTTATTGACGGTTCTGACGTTCTGCTGACCAA | [650] |
| dixiense_FL_CC | GACGAAGGCGTTGTTGCAGTTATTGACGGTTCTGACGTTCTGCTGACCAA | [650] |
| fibrinflatum_PA_DR | GACGAAGGTGTTGTTGCAGTTATTGAYGGTTCTGACGTTCTGTTGACCAA | [650] |
| fibrinflatum_ME_AR | GACGAAGGYGTTGTTGCAGTTATTGATGGTTCTGACGTTCTGTTGACCAA | [650] |
| fibrinflatum_GA_FR | GACGAAGGTGTTGTTGCAGTTATTGATGGTTCTGACGTTCTGTTGACCAA | [650] |
| haysi_AL_BCC3 | GACGAAGGTGTTGTTGCAGTTATTGACGGTTCTGACGTTCTCTTGACCAA | [650] |
| haysi_TX_SJR | GACGAAGGTGTTGTTGCAGTTATTGACGGTTCTGACGTTCTCTTGACCAA | [650] |
| infenestrum_NC_RR | GACGAAGGTGTTGTTGCAGTTATTGATGGTTCTGACRTTCTGTTGACCAA | [650] |
| infenestrum_SC_RBC | GACGAAGGTGTTGTTGCAGTTATTGATGGTTCTGACGTTCTGTTGACCAA | [650] |
| jenningsi_TN_PR | GACGAAGGTGTAATTGCAGTTATTGATGGTTCTGACGTTCTGTTGACCAA | [650] |

| | | |
|---|---|---|
| jenningsi_NC_ER | GACGAAGGTGTTGTTGCAGTTATTGATGGTTCTGACGTTCTGTTGACCAA | [650] |
| jenningsi_SC_FC | GACGAAGGTGTAGTTGCAGTTATTGATGGTTCTGACGTTCTGTTGACCAA | [650] |
| jenningsi_PA_BR | GACGAAGGTGTAATTGCAGTTATTGATGGTTCTGACGTTCTGTTGACCAA | [650] |
| jenningsi_GA_AR | GACGAAGGTGTAATTGCAGTTATTGATGGTTCTGACGTTCTGTTGACCAA | [650] |
| jonesi_FL_CC1 | GACGAAGGTGTTGTTGCAGTTATTGACGGTTCCGACGTTCTGTTGACCAA | [650] |
| jonesi_AL_BCC | GACGAAGGTGTTGTTGCAGTTATTGACGGTTCCGACGTTCTGCTAACCAA | [650] |
| jonesi_NC_CC | GACGAAGGTRTTGTTGCAGTTATTGACGGTTCTGACGTTCTGTTGACCAA | [650] |
| jonesi_NC_QC | GACGAAGGTGTTGTTGCAGTTATTGACGGTTCYGACRTTCTGYTGACCAA | [650] |
| jonesi_GA_WC | GACGAAGGTGTTGTTGCAGTTATTGACGGTTCTGACGTTCTGTTGACCAA | [650] |
| krebsorum_NC_MC | GACGAAGGTGTTGTTGCAGTTATTGACGGTTTTGACGTTCTGTTGACCAA | [650] |
| krebsorum_SC_CC2 | GACGAAGGTGTTGTTGCAGTTATTGACGGTTTTGACGTTCTGTTGACCAA | [650] |
| lakei_PA_NC | GACGAAGGTGTTGTTGCAGTWATTGACGGTTCTGAYGTTCTGTTGACCAA | [650] |
| lakei_SC_BR | GACGAAGGTGTTGTTGCAGTTATTGACGGTTCTGACRTTCTGTTGACCAA | [650] |
| lakei_FL_CR | GACGAAGGTGTTGTTGCAGTTATTGACGGTTCTGACGTTCTGTTGACCAA | [650] |

Appendix 1. (Cont.)

| Taxa | Sequence | Base # |
|---|---|---|
| lakei_Taunt_8_MA_TR | GACGAAGGTGTTGTTGCAGTTATTGACGGTTCTGACGTTCTGTTGACCAA | [650] |
| lakei_Taunt_9_MA_TR | GACGAAGGTGTTGTTGCAGTTATTGACGGTTCTGACGTTCTGCTGACCAA | [650] |
| luggeri_NWT | GATGAAGGTGTTGTTGCAGTTATTGACGGTTCCGATGTTCTGTTGACCAA | [650] |
| luggeri_NE_FR | GATGAAGGTGTTGTTGCAGTTATTGACGGTTCCGATGTTCTGTTGACCAA | [650] |
| luggeri_NC_HR | GATGAAGGTGTTGTTGCAGTTATTGACGGTTCCGATGTTCTGTTGACCAA | [650] |
| luggeri_KY_GR3 | GATGAAGGTGTTGTTGCAGTCATTGACGGTTCTGATGTTCTGTTGACCAA | [650] |
| 'notiale AL BC5+6' | GACGAAGGTGTTGTTGCAGTTATTGACGGTTCTGACGTTCTGTTGACCAA | [650] |
| notiale_VA_RR | GACGAAGGTGTTGTTGCAGTTATTGATGGGTCTGACGTTCTGTTGACCAA | [650] |
| notiale_TN_CC | GACGAAGGTGTTGTTGCAGTTATTGACGGTTCTGACGTTCTGTTGACCAA | [650] |
| notiale_SC_RBC | GACGAAGGTGTTGTTGCAGTTATTGACGGTTCTGACGTTCTGTTGACCAA | [650] |
| 'notiale AL BC6+6' | GACGAAGGTGTTGTTGCAGTTATTGACGGTTCTGACGTTCTGTTGACCAA | [650] |
| nyssa_AL_BC | GACGAAGGTGTTGTTGCAGTTATTGATGGTTCTGACGTTCTGTTAACCAA | [650] |
| nyssa_ME_AR | GACGAAGGTGTTGTTGCAGTTATTGATGGTTCTGACGTTCTGTTGACCAA | [650] |
| nyssa_VA_RR | GACGAAGGTGTTGTTGCAGTTATTGATGGTTCTGACGTTCTGTTRACCAA | [650] |
| nyssa_ME_PR | GAYGAAGGTGTTGTTGCAGTTATTGATGGTTCTGACGTTCTGTTRACCAA | [650] |
| nyssa_NC_TR | GACGAAGGTGYTGTTGCAGTTATTGATGGTTCTGACGTTCTGTTAACCAA | [650] |
| ozarkense_MO_GR2 | GACGAAGGTGTTGTTGCAGTTATTGACGGTTCTGACGTTCTGCTGACCAA | [650] |
| ozarkense_MO_GR1 | GACGAAGGTGTTGTTGCAGTTATTGACGGTTCTGACGTCCTGYTGACCAA | [650] |
| penobsco_ME_PR1 | GACGAAGGTGTTGTTGCAGTTATTGATGGTTCTGACGTTCTGTTGACCAA | [650] |
| penobsco_ME_PR2 | GACGAAGGTGTTGTTGCAGTTATTGATGGTTCTGACGTTCTGTTGACCAA | [650] |
| podostemi_NC_TR | GACGAAGGTGTTGTTGCAGTTATTGATGGTTCTAATGTTCTGTTGACCAA | [650] |
| podostemi_GA_AS | GACGAAGGTGTTGTTGCAGTTATTGATGGTTCTAATGTTCTGTTGACCAA | [650] |
| podostemi_MS_BC | GACGAAGGTGTTGTTGCAGTTATTGATGGTTCTAATGTTCTGTTGACCAA | [650] |
| podostemi_GA_CR | GACGAAGGTGTTGTTGCAGTTATTGATGGTTCTAATGTTCTGTTGACCAA | [650] |
| remissum_NC_NR2 | GACGAAGGTGTTGTTGCAGTTATTGATGGTTCTGACGTTCTGTTGACCAA | [650] |
| remissum_NC_NR1 | GACGAAGGTGTTGTTGCAGTTATTGATGGTTCTGACGTTCTGTTGACCAA | [650] |
| remissum_NC_NR3 | GACGAAGGTGTTGTTGCAGTTATWGATGGTTCTGACATTYTGTTGACCAA | [650] |
| 'snowi AL BC 4+6' | GACGAAGGTGTTGTTGCAGTTATTGACGGTTCTGACGTTCTGTTGACCAA | [650] |
| snowi_TN_CC | GACGAAGGTGTTGTTGCARTTATTGACGGTTCTGACGTTCTGTTGACCAA | [650] |
| 'snowi AL BC 4+4' | GACGAAGGTGTTGTTGCAGTTATTGATGGTTCTGACGTTCTGTTGACCAA | [650] |
| taxodium_GA_CC2 | GACGAAGGTGTTGTTGCAGTTATTGACGGTTCTGACGTTCTGTTGACCAA | [650] |
| taxodium_FL_CR | GACGAAGGTGTTGTTGCAGTTATTGACGGTTCTGACGTTCTGTTGACCAA | [650] |
| underhilli_AL_HC3 | GACGAAGGTGTTGTTGCAGTTATTGATGGTTCTGACGTTCTGCTGACCAA | [650] |
| underhilli_GA_FR | GACGAAGGTGTTGTTGCAGKTATTGATGGTTCTGATGTTCTGTTGACCAA | [650] |
| underhilli_GA_FS | GACGAAGGKGTTGTTGCAGTTATTGAYGGTTYTGACGTTYTGTTGACCAA | [650] |

| | | |
|---|---|---|
| tuberosum | TTTCCGAGGYACAATCATACCGCCGCCAATGTCCGGAGCACGTCTGACCT | [700] |
| verecundum | TTTCCGCGGCACAATCATACCTCCGCCAATGTCCGGAGCACGTCTGAAAT | [537] |
| decimatum | TTTCCGTGGTACTATCATACCTCCGCCAATGTCCGGAGCACGTCTGACAT | [700] |
| apricarium | TTTTCGTGGTACAATCATACCGCCGCCAATGTCCGGAGCACGCCTGACAT | [700] |
| reptans | TTTCCGTGGTACAATCATACCTCCGCCAATGTCYGGAGCACGCCTGACAT | [700] |
| anchist_AL_HC | TTTTCGCGGCACAATCATACCACCGCCAATGTGCGGAACACGTCTTACAT | [700] |
| anchist_DE_DR | TTTTCGYGGCACAATCATACCACCGCCAATGTGCGGARCACGTCTTACAT | [700] |
| anchist_ME_AR | TTTTCGCGGCACAATCATACCACCGCCAATGTGCGGAACACGTCTTACAT | [700] |
| anchist_NC_NR | TTTTCGMGGCACAATCATACCACCGCCAATGTGCGGAACACGTCTTACAT | [700] |
| anchist_ME_KR | TTTTCGTGGCACAATCATACCACCKCCAATGTGCGGAACACGTCTTACAT | [700] |
| aranti_GA_FS | TTTTCGCGGCACAATCATACCACCACCAATGAGCGGATCACGTCTGACAT | [700] |
| aranti_GA_AS | TTTTCGCGGCACAATCATACCACCACCAATGAGCGGATCACGTCTGACAT | [700] |
| aranti_AL_HC | TTTTCGCGGCACAATCATACCACCACCAATGAGCGGAGCACGTCTGACAT | [700] |

| | | |
|---|---|---|
| aranti_SC_LR | TTTTCGCGGCACAATCATACCACCACCAATGAGCGGAGCACGTCTGACAT | [700] |
| chlorum_NC_GC3 | TTTTCGYGGCACAATCATACCACCRCCAATGTGYGGAGCGCGGCTGACAT | [700] |
| chlorum_NC_GC1 | TTTTCGCGGCACAATCATACCACCACCAATGTGCGGAGCGCGGCTGACAT | [700] |
| chlorum_NC_GC4 | TTTTCGCGGCACAATCATACCACCACCAATGTGCGGAGCGCGGCTGACAT | [700] |
| confusum_TN_LR | TTWTCGCGGCACAATCATACCACCACCAATGTGTGGAGCGCGGCTGACAT | [700] |
| confusum_GA_GC | TTTTCGCGGCACAATCATACCACCACCAATGTGCGGAGCGAGGCTGACAT | [700] |
| confusum_GA_EC | TTTTCGCGGCACAATCATACCACCRCCAATGTGCGGAGCGCGGCTGACAT | [700] |
| confusum_TX_SJR | TTTTCGCGGCACAATCATACCACCACCAATGTGCGGAGCGCGGCTGACAT | [700] |
| confusum_TX_SR | TTTTCGCGGYACAATCATACCACCACCAATGTGCGGAGCGCGGCTGACAT | [700] |
| confusum_TX_Bayou | TTTTCGCGGCACAATCATACCACCACCAATGTGYGGAGCGCGGCTGACAT | [700] |
| definitum_PA_LC | TTTTCGCGGCACAATCATACCACCACCAATGTGTGGAGCGCGGCTGACAT | [700] |

Appendix 1. (Cont.)

| Taxa | Sequence | Base # |
|---|---|---|
| definitum_SC_GC | TTTTCGCGGCACAATCATACCACCACCAATGTGTGGAGCGCGGCTGACAT | [700] |
| dixiense_GA_WC | TTTTCGCGGCACAATCATACCACCACCTATGTGCGGAGCGCGGCTGACAT | [700] |
| dixiense_SC_LBC | TTTTCGCGGCACAATCATACCACCACCTATGTGCGGAGCGCGGCTGACAT | [700] |
| dixiense_NC_QC | TTTTCGCGGCACAATCATACCACCACCTATGTGCGGAGCGCGGCTGACAT | [700] |
| dixiense_FL_CC | TTTTCGCGGCACAATCATACCACCACCTATGTGCGGAGCGCGGCTGACAT | [700] |
| fibrinflatum_PA_DR | TTTTCGCGGCACAATCATACCACCGCCAATGTGCGGAGCGCGGCTGACCA | [700] |
| fibrinflatum_ME_AR | TTTTCGCGGCACAATCATACCACCRCCAATGTGYGGAGCGCGGCTGACRT | [700] |
| fibrinflatum_GA_FR | TTTTCGCGGCACAATCATACCACCACCAATGTGYGGAGCGCGGCTGACMT | [700] |
| haysi_AL_BCC3 | TTTTCGCGGCACAATCATACCACCACCAATGTGCGGAGCGCGGCTGACGT | [700] |
| haysi_TX_SJR | TTTTCGCGGCACAATCATACCACCACCAATGTGCGGAGCGCGGCTGACGT | [700] |
| infenestrum_NC_RR | TTTTCGMGGCACAATCATACCACCRCCAATGTGYGGAGCGCGGCTAGCAT | [700] |
| infenestrum_SC_RBC | TTTTCGCGGCACAATCATACCACCGCCAATGTGYGGAGCGCGGCTAGCAT | [700] |
| jenningsi_TN_PR | TTTTCGCGGCACAATCATACCACCGCCAATGTGCGGAGCGCGGCTRRCAT | [700] |
| jenningsi_NC_ER | TTTTCGCGGCACAATCACACCACCGCCAATGTGCGGAGCGCGGCTGGCAT | [700] |
| jenningsi_SC_FC | TTTTCGCGGCACAATCATACCACCACCAATGTGCGGAGCGCGGCTGACAT | [700] |
| jenningsi_PA_BR | TTTTCGCGGCACAATCATACCACCACCAATGTGYGGAGCGCGGCTGGCAT | [700] |
| jenningsi_GA_AR | TTTCCGCGGCACAATCATACCACCACCAATGTGCGGAGCGCGGCTGGCAT | [700] |
| jonesi_FL_CC1 | TTTTCGCGGCACAATCATACCACCACCAATGTGCGGAGCGCGGCTGACAT | [700] |
| jonesi_AL_BCC | TTTTCGCGGCACAATCATACCACCACCAATRTGCGGAGCGCGGCTKACAT | [700] |
| jonesi_NC_CC | TTTTCGCGGCACAATCATACCACCACCAATGTGNGGAGCGCGGCTGACAT | [700] |
| jonesi_NC_QC | TTTTCGCGGCACAATCATACCACCACCAATGTGYGGAGCRCGGCTGACAT | [700] |
| jonesi_GA_WC | TTTTCGCGGCACAATCATACCACCACCAATGTGCGGAGCGCGGCTAACAT | [700] |
| krebsorum_NC_MC | TTTTCGCGGCACAATCATACCACCACCAATGTGCGGAGCGCGGCTGACAG | [700] |
| krebsorum_SC_CC2 | TTTTCGCGGCACAATCATACCACCACCAATGTGCGGAGCGCGGCTGACAG | [700] |
| lakei_PA_NC | TTTTCGCGGCACAATCATACCACCRCCAATGTGCGGAGCGCGGCTGACAT | [700] |
| lakei_SC_BR | TTTTCGCGGCACAATCATACCACCRCCAATGTGCGGAGCGCGGCTGACAT | [700] |
| lakei_FL_CR | TTTTCGCGGSACAATCATACCACCACCAATGTGCGGAGCGCGGCTGACAT | [700] |
| lakei_Taunt_8_MA_TR | TTTTCGCGGCACAATCATACCCCCACCAATGTGCGGAGCGCGGCTGACAT | [700] |
| lakei_Taunt_9_MA_TR | TTTTCGCGGCACAATCATACCACCACCAATGTGCGGAGCGCGGCTGACAT | [700] |
| luggeri_NWT | TTTCCGTGGCACAATCATACCACCACCAATGTGCGGAACGCGGCTAACAT | [700] |
| luggeri_NE_FR | TTTCCGTGGCACAATTATACCACCACCAATGTGCGGAACGCGGCTRACAT | [700] |
| luggeri_NC_HR | TTTCCGTGGCACAATCATACCACCACCAATGTGCGGAACGCGGCTAACAT | [700] |
| luggeri_KY_GR3 | TTTTCGTGGCACAATCATACCACCACCAATGTGCGGAACGCGGCTAACAT | [700] |
| 'notiale AL BC5+6' | TTTTCGCGGCACAATCATACCACCACCAATGTGCGGAGCGCGGCTAACCT | [700] |
| notiale_VA_RR | TTTTCGCGGCACAATCATACCACCGCCAATGTGYGGAGCGCGGCTGACAT | [700] |
| notiale_TN_CC | TTTTCGCGGCACAATCATACCACCACCAATGTGTGGAGCGCGGCTAACST | [700] |
| notiale_SC_RBC | TTTTCGCGGCACAATCATACCACCACCAATGTGYGGAGCGCGGCTRACMT | [700] |
| 'notiale AL BC6+6' | TTTTCGCGGCACAATCATACCACCACCAATGTGTGGAGCGCGGCTAACCT | [700] |
| nyssa_AL_BC | TTTTCGAGGCACAATCATACCACCGCCAATGTGCGGAACACGTCTTACAT | [700] |
| nyssa_ME_AR | TTTTCGMGGCACAATCATACCACCGCCAATGTGCGGAACACGTCTTACAT | [700] |
| nyssa_VA_RR | TTTTCGAGGCACAATCATACCACCGCCAATGTGCGGAACACGTCTTACAT | [700] |
| nyssa_ME_PR | TTTTCGMGGCACAATCATACCACCSCCAATGTGCGGAACACGTCTTACAT | [700] |
| nyssa_NC_TR | TTTTCGMGGCACAATCATACCACCGCCAATGTGCGGARCACGTCTTACAT | [700] |
| ozarkense_MO_GR2 | TTTTCGCGGCACAATCATACCACCACCAATGTGCGGAGCGCGGCTGACGT | [700] |
| ozarkense_MO_GR1 | TTTTCGCGGCACAATCATACCACCACCAATGTGCGGAGCGCGGCTGACGT | [700] |
| penobsco_ME_PR1 | TTTTCGAGGCTCAATCATACCACCGCCAATGAGCGGAGCGCGGCTRRCAT | [700] |
| penobsco_ME_PR2 | TTTTCGAGGCACAATCATACCACCGCCAATGAGCGGAGCGCGGCTGACAT | [700] |
| podostemi_NC_TR | TTTCCGCGGCACAATCATACCACCACCAATGTGCGGAGCGCGGCTGACGT | [700] |
| podostemi_GA_AS | TTTTCGCGGCACAATCATACCACCACCAATGTGCGGAGCGCGGCTGACGT | [700] |
| podostemi_MS_BC | TTTTCGCGGCACAATCATACCACCACCAATGTGCGGAGCGCGGCTGACGT | [700] |
| podostemi_GA_CR | TTTYCGCGGCACAATCATACCACCACCAATGTRCGGAGCGCGGCTGACGT | [700] |
| remissum_NC_NR2 | TTTTCGAGGCACAATCATACCACCGCCAATGTGCGGAGCGCGGCTGACAT | [700] |
| remissum_NC_NR1 | TTTTCGAGGCACAATCATACCACCGCCAATGTGCGGAGCGCGGCTGACAT | [700] |
| remissum_NC_NR3 | TTTTCGAGGCACAATCATACCACCRCCAATGTGTGGAGCGCGGCTGACAT | [700] |

| | | |
|---|---|---|
| 'snowi AL BC 4+6' | TTTTCGCGGCACAATCATACCACCACCAATGTGTGGAGCGCGGCTAACCT | [700] |
| snowi_TN_CC | TTTTCGCGGCACAATCATACCACCACCAATGTGTGGAGCGCGGCTAACCT | [700] |
| 'snowi AL BC 4+4' | TTTTCGCGGCACAATCATACCACCGCCAATGTGCGGAGCGCGGCTGACAT | [700] |
| taxodium_GA_CC2 | TTTTCGCGGCACAATCATACCACCACCAATGTGCGGAGCGCGGCTGACAT | [700] |
| taxodium_FL_CR | TTTTCGCGGCACAATTATACCACCACCAATGTGCGGAGCGCGGCTGACAT | [700] |
| underhilli_AL_HC3 | TTTTCGCGGCACAATCATACCACCRCCAATGTGYGGAGCGCGGCTRACMT | [700] |
| underhilli_GA_FR | TTTTCGCGGCACAATCATACCACCGCCAATGTGCGGAGCGCGGCTGACAT | [700] |
| underhilli_GA_FS | TTTTCGCGGCACAATCATACCACCRCCAATGTGYGGAGCGCGGCTRACMT | [700] |

Appendix 1. (Cont.)

| Taxa | Sequence | Base # |
|---|---|---|
| tuberosum | TTTCGAATCCAATCAGTCAGGTTGGTTTTCCGACAAGACGAGAAAGCGGC | [750] |
| verecundum | TTTCGAATCCAATCAGTCAGGTTGGTTTTCCGACAAAACGCGAAAGCGGA | [587] |
| decimatum | TTCCAAATCCAATCAGCCAGGTTGGTTTTACGACAAGACGAGATTGCGGG | [750] |
| apricarium | TTTCGAATCCAATCAGCCAGGTAGGCTTTCCGACAAGACGAGATTGCGGA | [750] |
| reptans | TTTCGAATCCGATCAGTCAGGTTGGCTTTCCGACAAGACGAGATTGCGGT | [750] |
| anchist_AL_HC | TTACCCATCCTATCAGCCAGGTTGGTTTTCCGACAAGACGAGATTGTGAA | [750] |
| anchist_DE_DR | TTACWCATCCTATCAGCCAGGTTGGTTTTCCGACAAGACGAGATTGTGAA | [750] |
| anchist_ME_AR | TTACCCATCCTATCAGCCAGGTTGGTTTTCCGACAAGACGCGATTGTGAA | [750] |
| anchist_NC_NR | TTACCCATCCTATCAGCCAGGTTGGTTTTCCGACAAGACGCGATTGTGAA | [750] |
| anchist_ME_KR | TTACCCATCCTATCAGCCAGGTTGGTTTTCCGACAAGACGCGATTGTGAA | [750] |
| aranti_GA_FS | TTGCTCATCCTATMTGCCAGGTTGGGTTTCCGACAAGACGAGAKTGCGAA | [750] |
| aranti_GA_AS | TTGCTCATCCTATATGCCAGGTTGGGTTTCCGACAAGACGAGAGTGCGAA | [750] |
| aranti_AL_HC | TTGCTCATCCTATCTGCCAGGTTGGGTTTCCGACAAGACGAGATTGCGAA | [750] |
| aranti_SC_LR | TTGCTCATCCTATMTGCCAGGTTGGGTTTCCGACAAGACGAGATTGCGAA | [750] |
| chlorum_NC_GC3 | TTRCTCATCCTATCAGCCARGTTGGKTTTCCKACAAGACGAGATTGCGAA | [750] |
| chlorum_NC_GC1 | TTGCTCATCCTATCAGCCAAGTTGGGTTTCCKACAAGACGAGATTGCGAA | [750] |
| chlorum_NC_GC4 | TTGCTCATCCTATCAGCCAAGTTGGGTTTCCGACAAGACGAGATTGCGAA | [750] |
| confusum_TN_LR | TTRCKCATCCTATCAGCCARGTTGGKTTTCCGACAAGACGAGATTGCGAA | [750] |
| confusum_GA_GC | TTGCTCATCCTATCAGCCAAGTTGGGTTTCCGACAAGACGAGATTTCGAA | [750] |
| confusum_GA_EC | TTGCTCATCCTATCAGCCAAGTTGGGTTTCCGACAAGACGAGATTKCGAA | [750] |
| confusum_TX_SJR | TTGCTCATCCTATCAGCCAGGTTGGGTTTCCGACAAGACGAGATTGCGAA | [750] |
| confusum_TX_SR | TTGMTCATCCTATCAGCCAGGTTGGGTTTCCGACAAGACGAGATTGCGAA | [750] |
| confusum_TX_Bayou | TTGCTCATCCTATCAGCCAAGTTGGGTTTCCGACAAGACGAGATTGCGAA | [750] |
| definitum_PA_LC | TTACGCATCCTATCAGCCAGGTTGGTTTTCCGACAAGACGAGATCGCGAA | [750] |
| definitum_SC_GC | TTACGCATCCTATCAGCCAGGTTGGTTTTCCGACAAGACGAGATCGCGAA | [750] |
| dixiense_GA_WC | TTACGCATCCTATCAGCCAGGTTGGTTTTCCAACAAGGCGAGATTGCAAA | [750] |
| dixiense_SC_LBC | YTACGCATCCTATCAKCCAGSTTGGTTTTCCWACAAGSCGAGATTGCAAA | [750] |
| dixiense_NC_QC | TTACGCATCCTATCAGCCAGGTTGGTTTTCCAACAAGGCGAGATTGCAAA | [750] |
| dixiense_FL_CC | TTACGCATCCTATCAGCCAGGTTGGTTTTCCAACAAGGCGAGATTGCAAA | [750] |
| fibrinflatum_PA_DR | TTACACATCCTATCAGCCAGGTTGGCTTTCCGACAAGACGAGATTGCGAA | [750] |
| fibrinflatum_ME_AR | TTACACATCCTATCAGCCAGGTTGGCTTTCCGACAAGACGAGATTGCGAA | [750] |
| fibrinflatum_GA_FR | TTACACATCCTATCAGCCAGGTTGGCTTTCCGACAAGACGAGATTGCGAA | [750] |
| haysi_AL_BCC3 | TTACGCATCCTATTAGCCAGGTTGGCTTCCCKACAAGACGAGATTGCGAA | [750] |
| haysi_TX_SJR | TTRCGCATCCTATTAGCCAGGTTGGCTTCCCKACAAGACGAGATTGCGAA | [750] |
| infenestrum_NC_RR | TTRCWCATCCTATCAGCCAGGTTGGTTTTCCGACAAGACGMGATTGCGWA | [750] |
| infenestrum_SC_RBC | TTACTCATCCTATCAGCCAGGTTGGTTTTCCGACAAGACGCGATTGCGAA | [750] |
| jenningsi_TN_PR | TTACACATCCTATCAGCCAGGTTGGCTTTCCGACAAGACGAGATAGCGAA | [750] |
| jenningsi_NC_ER | TTTCACATCCTATCAGCCAGGTTGGCTTTCCGACAAGACGAGATTGCGAA | [750] |
| jenningsi_SC_FC | TTGCACATCCTATCAGCCAGGTTGGCTTTCCGACAAGACGAGATAGCGAA | [750] |
| jenningsi_PA_BR | TTGCACATCCTATCAGCCAGGTTGGTTTTCCTGCAAGACGAGATAGCGAA | [750] |
| jenningsi_GA_AR | TTGCTCATCCTATCAGCCAGGTTGGTTTTCCTGCAAGACGAGATTGCGAA | [750] |
| jonesi_FL_CC1 | TTGCTCATCCTATCAGCCAGGTTGGTTTTCCGACACGACGAGATTGCGAA | [750] |
| jonesi_AL_BCC | TTGCTCATYCTATCAGCCAGGTTGGTTTTCCGACAMGACGAGATTGCGAA | [750] |
| jonesi_NC_CC | TTGCTCATCCTATCAGCCAAGTTGGGTTTCCGACAAGACGAGATTGCGAA | [750] |
| jonesi_NC_QC | TTGCTCATCCTATCAGCCARGTTGGTTTTCCGACACGACGAGATTGCGAA | [750] |
| jonesi_GA_WC | TTACACATCCTATCAGCCAGGTTGGTTTTCCGACAAGACGAGATTGCGAA | [750] |
| krebsorum_NC_MC | TTGCGCATCCTATTAGCCAGGTTGGCTTTCTGACAAGACGAAATTGCGAA | [750] |
| krebsorum_SC_CC2 | TTGCGCATCCTATTAGCCAGGTTGGCTTTCTGACAAGACGAAATTGCGAA | [750] |
| lakei_PA_NC | TTGCKCATCCTATCAGCCAAGTTGGGTTTCCGACAAGACAAGATTKCGAA | [750] |
| lakei_SC_BR | TTGCTCATCCTATCAGCCAAGTTGGGTTTCCGACAAGACGAGATTGCGAA | [750] |
| lakei_FL_CR | TTGCTCATCCTATCAGCCAAGTTGGGTTTCYGACAAGACGAGATTGCGAA | [750] |
| lakei_Taunt_8_MA_TR | TTGCTCATCCTATCAGCCAGGTTGGGTTTCCGACAAGACGAGATTGCGAA | [750] |
| lakei_Taunt_9_MA_TR | TTGATCATCCTATCAGCCAAGTTGGGTTTCCGACAAGACGAGATTGCGAA | [750] |
| luggeri_NWT | TTGCTCATCCTATCAGCCAAGTTGGTTTTCCGACAAGACGAGATTGCGAG | [750] |
| luggeri_NE_FR | TTGCTCATCCTATCAGCCAAGTTGGTTTTCCGACAAGACGAGATTGCGAG | [750] |
| luggeri_NC_HR | TTGCTCATCCTATCAGCCAAGTTGGTTTTCCGACAAGACGAGATTGCGAG | [750] |
| luggeri_KY_GR3 | TTGCTCATCCTATCAGCCAGGTTGGTTTTCCGACAAGACGAGATTGCGAA | [750] |

| | | |
|---|---|---|
| 'notiale AL BC5+6' | TTACACATCCTATCAGCCAGGTGGGCTTTCCGACAAGACGAGATTGCGAA | [750] |
| notiale_VA_RR | TTACACATCCTATCAGCCAGGTTGGCTTTCCGACAAGACGAGATTGCGAA | [750] |
| notiale_TN_CC | TTACACATCCTATCAGCCAGGTTGGCTTTCCGACAAGACGAGATTGCGAA | [750] |
| notiale_SC_RBC | TTACRCATCCTATCAGCCAGGTTGGCTTTCCGACAAGACGAGATTGCGAA | [750] |
| 'notiale AL BC6+6' | TTACACATCCTATCAGCCAGGTTGGCTTTCCGACAAGACGAGATTGCGAA | [750] |

Appendix 1. (Cont.)

| Taxa | Sequence | Base # |
|---|---|---|
| nyssa_AL_BC | TTGCTCATCCTATCAGCCAGGTTGGTTTTCCGACAAGACGMGATTGCGAT | [750] |
| nyssa_ME_AR | TTGCTCATCCTATCAGCCAGGTTGGTTTTCCGACAAGACGCGATTGCGAT | [750] |
| nyssa_VA_RR | TTGCTCATCCTATCAGCCAGGTTGGTTTTCCGACAAGACGCGATTGYGAT | [750] |
| nyssa_ME_PR | TTGCTCATCCTATCAGCCAGGTTGGTTTTCCGACAAGACGCGATTGCGAW | [750] |
| nyssa_NC_TR | TTRCTCATCCTATCAGCCAGGTTGGTTTTCCGACAAGACGMGATTGCGAW | [750] |
| ozarkense_MO_GR2 | TTGCTCATCCTATCAGYCAGGTTGGTTTTCCKACAAGACGAGATTGCGAA | [750] |
| ozarkense_MO_GR1 | TTGCTCATCCTATCAGCCAGGTTGGTTTTCCTACAAGACGAGATTGYGAA | [750] |
| penobsco_ME_PR1 | TTGCTCATCCTATCAGCCAGGTTGGTTTTCCGACAAGACGMGATTGCGWA | [750] |
| penobsco_ME_PR2 | TTGCTCATCCTATCAGCCAGGTTGGTTTTCCGACAAGACGCGATTGCGAA | [750] |
| podostemi_NC_TR | TTGATCATCCTATTAGCCATGTTGGTTTTCCGACAAGACGAGATTGTGAA | [750] |
| podostemi_GA_AS | TTGATCATCCTATTAGCCAGGTTGGTTTTCCGACAAGACGAGATTGTGAA | [750] |
| podostemi_MS_BC | TTGATCATCCTATTAGCCAGGTTGGTTTTCCGACAAGACGAGATTGTGAA | [750] |
| podostemi_GA_CR | TTGATCATCCTATTAGCCATGTTGGTTTTCCGACAAGACGAGATTGTGAA | [750] |
| remissum_NC_NR2 | TTGCTCATCCYATCAGCCAGGTTGGTTTTCCGACAAGACGAGATTGCGAA | [750] |
| remissum_NC_NR1 | TTGCTCATCCTATCAGCCAGGTTGGTTTTCCGACAAGACGAGATTGCGAA | [750] |
| remissum_NC_NR3 | TTGCTCATCCTATCAGCCAGGTTGGTTTTCCGACAAGACGAGATTGCGAA | [750] |
| 'snowi AL BC 4+6' | TTACACATCCTATCAGCCAGGTTGGCTTTCCGACAAGACGAGATTGCGAA | [750] |
| snowi_TN_CC | TTACACATCCTATCAGCCAGGTTGGCTTTCCGACAAGACGAGATTGCGAA | [750] |
| 'snowi AL BC 4+4' | TTACACATCCTATCAGCCAGGTTGGCTTTCCGACAAGACGAGATAGCGAA | [750] |
| taxodium_GA_CC2 | TTGCGCATCCTATCAGCCAAGTTGGGTTTCCGACAAGACGAGATTGCGAA | [750] |
| taxodium_FL_CR | TTGCTCATCCTATCAGCCAAGTTGGGTTTCTGACAAGACGAGATTGCGAA | [750] |
| underhilli_AL_HC3 | TTACGCATCCTATCAGCCAGGTTGGCTTTCCGACAAGACGAGATTGCGAA | [750] |
| underhilli_GA_FR | TTACACATCCTATCAGCCAGGTTGGCTTTCCAACAAGACGAGATTGCGAA | [750] |
| underhilli_GA_FS | TTACACATCCTATCAGCCAGGTTGGCTTTCCRACAAGACGAGATTGCGAA | [750] |

| | | |
|---|---|---|
| tuberosum | GAGGAACAAATGAACAGTTTTTTCGCCATAGATGCTGTGACTGGTGTCGT | [800] |
| verecundum | GAGGAACAAATGAATAGTTTTTTCGCCTTTGATGCTGTGACTGGTGTCGT | [637] |
| decimatum | GAGGAGCAGGTGAACAGTTTTTTCGCCGTAGATGCTGTGACTGGTGTCGT | [800] |
| apricarium | GAGGAGCAGATGAACAGTTTTTTCGCCGTAGATGCTGTGACTGGTGTCGT | [800] |
| reptans | GAGGAACAGATGAACAGTTTTTTCGCCGTAGATGCTGTGACTGGTGTCGT | [800] |
| anchist_AL_HC | GAGGAGCAGATGAACTCCTTTTTCGCCTTAGATGCTGTGACTGGKGTCGT | [800] |
| anchist_DE_DR | GAGGAGCAGATGAACTCCTTTTTCGCCTTAGATGCTGTGACTGGTGTCGT | [800] |
| anchist_ME_AR | GAGGAGCAGATGAACTCCTTTTTCGCCTTAGATGCTGTGACTGGTGTCGT | [800] |
| anchist_NC_NR | GAGGAGCAGATGAACTCCTTTTTCGCCTTAGATGCTGTGACTGGTGTCGT | [800] |
| anchist_ME_KR | GARGAGCAGATGAACTCCTTTTTCGCCTTAGATGCTGTGACTGGTGTCGT | [800] |
| aranti_GA_FS | GAGAAGCAGATGAACTCCTTTTTCGCCTTAGATGCTGTGACTGGTGTCGT | [800] |
| aranti_GA_AS | GAGAAGCAGATGAACTCCTTTTTCGCCTTAGATGCTGTGACTGGTGTCGT | [800] |
| aranti_AL_HC | GAGAAGCAGATGAACTCCTTTTTCGCCTTAGATGCTGTGACTGGTGTCGT | [800] |
| aranti_SC_LR | GAGAAGCAGATGAACTCCTTTTTCGCCTTAGATGCTGTGACTGGTGTCGT | [800] |
| chlorum_NC_GC3 | GAGGAGCAGATGAACTCCTTTTTCGCCTTAGATGCTGTGACTGGTGTCGT | [800] |
| chlorum_NC_GC1 | GAGGAGCAGATGAACTCCTTTTTCGCCTTAGATGCTGTGACTGGTGTCGT | [800] |
| chlorum_NC_GC4 | GAGGAGCAGATGAACTCCTTTTTCGCCTTAGATGCTGTGACTGGTGTCGT | [800] |
| confusum_TN_LR | GAGGAGCAGATGAACTCCTTTTTCGCTTTAGATGCTGTGACTGGTGTCGT | [800] |
| confusum_GA_GC | GARGAGCAGATGAACTCCTTTTTCGCTTTAGATGCTGTGACTGGTGTCGT | [800] |
| confusum_GA_EC | GAGGARCAGATGAACTCCTTTTTCGCCTTAGATGCTGTGACTGGTGTCGT | [800] |
| confusum_TX_SJR | GRGGAGCGGATGAACTCCTTTTTCSCCTTAGATGCTGTGACTGGTGTCGT | [800] |
| confusum_TX_SR | GAGGAGCAGATGAACTCCTTTTTCGCCTTAGATGCTGTGACTGGTGTCGT | [800] |
| confusum_TX_Bayou | GAGGAGCAGATGAACTCCTTTTTCGCTTTAGATGCTGTGACTGGTGTCGT | [800] |
| definitum_PA_LC | GAGGAGCAGATGAACTCCTTTTTCGCCTTAGATGCTGTGACTGGCGTCGT | [800] |
| definitum_SC_GC | GAGGAGCAGATGAACTCCTTTTTCGCCTTAGATGCTGTGACTGGCGTCGT | [800] |
| dixiense_GA_WC | GAGGAGCAGATGAACTTTTTTTTCGCCTTAGATGCTGTGACTAATGTCGT | [800] |
| dixiense_SC_LBC | GAGGAGCAGATGAACTTTTTTTTCGCCTTAGATGCTGTGACTAATGTCGT | [800] |
| dixiense_NC_QC | GAGGAGCAGATGAACTTTTTTTTCGCCTTAGATGCTGTGACTAATGTCGT | [800] |
| dixiense_FL_CC | GAGGAGCAGATGAACTTTTTTTTCGCCTTAGATGCTGTGACTAATGTCGT | [800] |
| fibrinflatum_PA_DR | GAGGAGCAGATGAACTCCTTTTTCGCCTTAGATGCTGTGACTGGTGTCGT | [800] |
| fibrinflatum_ME_AR | GAGGAGCAGATGAACTCCTTTTTCGCCTTAGATTCTGTGACTGGTGTCGT | [800] |
| fibrinflatum_GA_FR | GAGGAGCAGATGAACTCCTTTTTCGCCTTAGATGCTGTGACTGGTGTCGT | [800] |
| haysi_AL_BCC3 | GAGGAGCAGATGAACTCCTTTTTCGCTTTAGATGCTGTGACCGGTGTCGT | [800] |

| | | |
|---|---|---|
| haysi_TX_SJR | GAGGAGCAGATGAACTCCTTTTTCGCYTTAGATGCTGTGACYGGTGTCGT | [800] |
| infenestrum_NC_RR | GARGAGCAGATGAACTCYTTTTTCGCYTTAGATGCTGTGACTGGTGTCGT | [800] |

Appendix 1. (Cont.)

| Taxa | Sequence | Base # |
|---|---|---|
| infenestrum_SC_RBC | GAGGAGCAGATGAACTCCTTTTTCGCTTTAGATGCTGTGACTGGTGTCGT | [800] |
| jenningsi_TN_PR | GAGGAGCAGATGAACTCCTTTTTCGCCTTAGATGCTGTGACTGGTGTCGT | [800] |
| jenningsi_NC_ER | GAGGAGCAGATGAACTCCTTTTTCGCCTTAGATGCTGTGACTGGTGTCGT | [800] |
| jenningsi_SC_FC | GAGGAGCAGATGAAYTCCTTTTTCGCCTTAGATGYTGTGACTGGTGTCGT | [800] |
| jenningsi_PA_BR | GAGGAGCAGATGAAYTCCTTTTTCGCCTTAGATGCTGTGACTGGTGTCGT | [800] |
| jenningsi_GA_AR | GAGGAGCAGATGAACTCCTTTTTCGCCTTAGATGCTGTGACTGGTGTCGT | [800] |
| jonesi_FL_CC1 | GAGGAGCAGATGAACTCCTTTTTCGCCTTAGATGCTGTGACTGGTGTCGT | [800] |
| jonesi_AL_BCC | GAGGAGCAGATGAACTCCTTTTTCGCCTTAGATGCTGTGACTGGYGTCGT | [800] |
| jonesi_NC_CC | GAGGAGCAGATGAACTCCTTTTTCGCCTTAGATGCTGTGACTGGYGTCGT | [800] |
| jonesi_NC_QC | GAGGAGCAGATGAACTCCTTTTTCGCCTTAGATGCTGTGACTGGYGTCGT | [800] |
| jonesi_GA_WC | GAGGAGCAGATGAACTCATTTTTCACCTTAGATGCTGTGACTGGTGTCGT | [800] |
| krebsorum_NC_MC | GAGAAGCAGATGAACTCCTTTTTCGCCTTGGATGCTGTGACTGGTGTCGT | [800] |
| krebsorum_SC_CC2 | GAGAAGCAGATGAACTCCTTTTTCGCCTTGGATGCTGTGACTGGTGTCGT | [800] |
| lakei_PA_NC | GAGGAGCAGATGAACTCCTTTTTCGCCTTAGATGCTGTGACTGGTGTCGT | [800] |
| lakei_SC_BR | GAGGAGCAGATGAACTCCTTTTTCGCCTTAGATGCTGTRACTGGTGTCGT | [800] |
| lakei_FL_CR | GAGGAGCAGATGAACTCCTTTTTCGCCTTAGATGCTGTGACTGGTGTCGT | [800] |
| lakei_Taunt_8_MA_TR | GAGGAGCAGATGAACTCCTTTTTCGCCTTAGATGCTGTGACTGGTGTCGT | [800] |
| lakei_Taunt_9_MA_TR | GAGGAACAGATGAACTCCTTTTTCGCCTTAGATGCTGTGACTGGTGTCGT | [800] |
| luggeri_NWT | GAGGAGCAGATGAACTCCTTTTTCGCCTTAGATGCTGTGACTGGCGTCGT | [800] |
| luggeri_NE_FR | GAGGAGCAGATGAACTCCTTTTTCGCCTTAGATGCTGTGACTGGCGTCGT | [800] |
| luggeri_NC_HR | GAGGAGCAGATGAACTCCTTTTTCGCCTTAGATGCTGTGACTGGCGTCGT | [800] |
| luggeri_KY_GR3 | GAGGAGCAGATGAACTCCTTTTTCGCCTTAGATGCTGTGACTGGCGTCGT | [800] |
| 'notiale AL BC5+6' | GAGGAGCAGATGAACTCCTTTTTCGCTTTAGATGCTGTGACTGGTGTCGT | [800] |
| notiale_VA_RR | GAGGAGCAGATGAACTCCTTTTTCGCCTTAGATGCTGTGACTGGTGTCGT | [800] |
| notiale_TN_CC | GAGGAGCAGATGAACTCCTTTTTCGCCTTAGATGCTGTGACTGGTGTCGT | [800] |
| notiale_SC_RBC | GAGGAGCAGATGAACTCCTTTTTYGCMTTAGATGCTGTGACTGGTGTCGT | [800] |
| 'notiale AL BC6+6' | GAGGAGCAGATGAACTCCTTTTTCGCATTAGATGCTGTGACTGGTGTCGT | [800] |
| nyssa_AL_BC | GAGGAGCAGATGAACTCCTTTTTCGCTTTAGATGCTGTGACTGGTGTCGT | [800] |
| nyssa_ME_AR | GAGGAGCAGATGAACTCCTTTTTCGCTTTAGATGCTGTGACTGGTGTCGT | [800] |
| nyssa_VA_RR | GAGGAGCAGATGAACTCCTTTTTCGCTTTAGATGCTGTGACTGGTGTCGT | [800] |
| nyssa_ME_PR | GAGGAGCAGATGAACTCCTTTTTCGCYTTASATGCTGTGACTGGTGTCGT | [800] |
| nyssa_NC_TR | GAGGAGCAGATGAACTCCTTTTTCGCYTTASATGCTGTGACTGGTGTCGT | [800] |
| ozarkense_MO_GR2 | GAGGATCAGATGAACTCCTTTTTCGCCTTAGATGCTGTGACTGGTGTCGT | [800] |
| ozarkense_MO_GR1 | GAGGATCAGATGAACTCCTTTTTCGCCTTAGATGCTGTGACTGGTGTCGT | [800] |
| penobsco_ME_PR1 | GAAGAGCAGATGAACTCCTTTTTCGCTTTAGATGCTGTGACTGGTGTCGT | [800] |
| penobsco_ME_PR2 | GAGGAGCAGATGAACTCCTTTTTCGCTTTAGATGCTGTGACTGGTGTCGT | [800] |
| podostemi_NC_TR | GAGGAGCAGATGAACACCTTTTTCGCATTAGATGCTGTGACTGGTGTCGT | [800] |
| podostemi_GA_AS | GAGGAGCAGATGAACACCTTTTTCGCATTAGATGCTGTGACTGGTGTCGT | [800] |
| podostemi_MS_BC | GAGGAGCAGATGAACACCTTTTTCGCATTAGATGCTGTGACTGGTGTCGT | [800] |
| podostemi_GA_CR | GAGGAGCAGATGAACACCTTTTTCGCATTAGATGCTGTGACTGGTGTCGT | [800] |
| remissum_NC_NR2 | GAGGAGCAGATGAACTCCTTTTTCGCTCTAGATGCTGTGACTGGWGTCGT | [800] |
| remissum_NC_NR1 | GAGGAGCAGATGAACTCCTTTTTCGCTCTAGATGCTGTGACTGGTGTCGT | [800] |
| remissum_NC_NR3 | GARGAGCAGATGAACTCCTTTTTCGCTYTAGATGCTGTGACTGGTGTCGT | [800] |
| 'snowi AL BC 4+6' | GAGGAGCAGATGAACTCCTTTTTCGCATTAGATGCTGTGACTGGTGTCGT | [800] |
| snowi_TN_CC | GAGGAGCAGATGAACTCCTTTTTCGCCTTAGATGCTGTGACTGGTGTCGT | [800] |
| 'snowi AL BC 4+4' | GAGGAGCAGATGAACTCCTTTTTCGCATTAGATGCTGTGACTGGTGTCGT | [800] |
| taxodium_GA_CC2 | GAGGAGCAGATGAACTCCTTTTTCGCCTTAGATGCTGTGACTGGTGTCGT | [800] |
| taxodium_FL_CR | GAGGAGCAGATGAACTCCTTTTTCGCCTTAGATGCTGTGACTGGTGTCGT | [800] |
| underhilli_AL_HC3 | GAGGAGCAGATGAACTCCTTTTTYGCCTTAGATGCTGTGACTGGTGTCGT | [800] |
| underhilli_GA_FR | GAGGAGCAGATGAACTCCTTTTTTTCTTTAGATGCTGTGACTGGTGTCGT | [800] |
| underhilli_GA_FS | GAGGAGCAGATGAACTCCTTTTTTGCCTTAGATGCTGTGACTGGTGTCGT | [800] |

| | | |
|---|---|---|
| tuberosum | GAACATATGTGAACCAAAATTCACGGTTAACGAAAAAGACCCGGTTCCAG | [850] |
| verecundum | AAATGTGTGCGAACCACAATTCACAATTAACGAAAAAGACCCGATTCCCG | [687] |
| decimatum | GAATATATGCGAACCACAATTCACGATTAACGAAAAAGACCCGGTGCCCG | [850] |
| apricarium | GAATATTTGCGAACCACAATTCACGATTAACGAAAAGGACCCGGTGCCCG | [850] |
| reptans | GAACATTTGCGAGCCACAATTCACGATTAACGAAAAAGATCCGGTGCCCG | [850] |
| anchist_AL_HC | GAATWTATGTGAACCACRATTCACGATTAATGAAAAGGATCCRGKGCCCG | [850] |
| anchist_DE_DR | GAAYWTATGTGAACCACAATTCACGATTAAYCAAAAGGATCCGGKGCCCG | [850] |
| anchist_ME_AR | GAACATATGTGAACCACAATTCACGATTAATGAAAAGGATCCGGTGCCCG | [850] |

Appendix 1. (Cont.)

| Taxa | Sequence | Base # |
|---|---|---|
| anchist_NC_NR | GAATATATGTGAACCACAATTCACGATTAATGAAAAGGATCCGGTGCCCG | [850] |
| anchist_ME_KR | GAATATATGTGAACCACAATTCACGATTAATGAAAAGGATCCGGTGCCCG | [850] |
| aranti_GA_FS | GTATATATGTGAACCACAATTCACGATTAATGAAAAAGATCCGGTGCCCG | [850] |
| aranti_GA_AS | GTATATATGTGAACCACAATTCACGATTAATGAAAAAGATCCGGTGCCCG | [850] |
| aranti_AL_HC | GTATATATGTGAACCACAATTCACGATTAATGAAAAAGATCCGGTGCCCG | [850] |
| aranti_SC_LR | GTATATATGTGAACCACAATTCACGATTAATGAAAAAGATCCGGTGCCCG | [850] |
| chlorum_NC_GC3 | GAAYATATGTGAACCACAATTCACGATTAATGAAAAAGATGCGGTGCCCG | [850] |
| chlorum_NC_GC1 | TAACATATGTGAACCACAATTCACGATTAATGAAAAGGATCCGGTGCCCG | [850] |
| chlorum_NC_GC4 | GAATATTTGTGAACCACAATTCACGATTAATGAAAAAGATGCGGTGCCCG | [850] |
| confusum_TN_LR | GAATATTTGTGAACCACAATTCACGATTAATGAAAAAGATGCGGTGCCCG | [850] |
| confusum_GA_GC | TAAYATATGTGAACCACAATTCGCGRTAAATGAAAAAGATCCGGTGCCCG | [850] |
| confusum_GA_EC | TAACATATGTGAACCACAATTCRCGATTAATGAAAAAGATCCGGTGCCCG | [850] |
| confusum_TX_SJR | KAACATATGYGAACCACAATTCACGATTAATGAAAAGGATSCGGTGCCCG | [850] |
| confusum_TX_SR | TAACATATGTGAACCACAATTCACGATTAATGAAAAGGATCCGGTGCCCG | [850] |
| confusum_TX_Bayou | GAATGTATGTGAACCACAATTCACGATTAATGAAAAGGATCCGGTGCCCG | [850] |
| definitum_PA_LC | TAACATATGTGAACCACAATTCACGGTAAATGAAAAAGATCCGGTGCCCG | [850] |
| definitum_SC_GC | TAACATATGTGAACCACAATTCACGGTAAATGAAAAAGATCCGGTGCCCG | [850] |
| dixiense_GA_WC | GAATATATGTGAACCACAATACACGATTAATGAAAAAGATCCGGTGCCCG | [850] |
| dixiense_SC_LBC | GAATATATGTGAACCACAATACACGATTAATGAAAAAGATCCGGWGCCCG | [850] |
| dixiense_NC_QC | GAATATATGTGAACCACAATACACGATTAATGAAAAAGATCCGGTGCCCG | [850] |
| dixiense_FL_CC | GAATATATGTGAACCACAATACACGATTAATGAAAAAGATCCGGTGCCCG | [850] |
| fibrinflatum_PA_DR | GAACATATGTGAACCACAATTCACGATCAATGAAAAGGACCCGGTGCCCG | [850] |
| fibrinflatum_ME_AR | GAACATATGTGAACCACAATTCACGATCAATGAAAAGGACCCGGTGCCCG | [850] |
| fibrinflatum_GA_FR | GAACATATGTGAACCACAATTCACGATCAATGAAAAGGACCCGGTGCCCG | [850] |
| haysi_AL_BCC3 | GAATATATGTGAACCACAATTCACGATTAATGAAAAGGATCCGGTGCCCG | [850] |
| haysi_TX_SJR | GAATATATGTGAACCACAATTCACGATWAATGAAAAGGATCCGGTGCCCG | [850] |
| infenestrum_NC_RR | GAATATATGTGAACCACAATTCACGATTAATGAAAAGGATCCGGTGCCCG | [850] |
| infenestrum_SC_RBC | GAATATATGTGAACCACAATTCACGATTAATGAAAAGGATCCGGTGCCCG | [850] |
| jenningsi_TN_PR | GAATATATGTGAACCACAATTCACGATTAATGAAAAGGATCTGGTGCCCG | [850] |
| jenningsi_NC_ER | GAATATATGTGAACCACAATTCACGATTAATGAAAAGGATCCGGTGCCCG | [850] |
| jenningsi_SC_FC | AAAYATATGTGAACCACAATTCACGATTAATAAAAAGGATCCGGTGCCTG | [850] |
| jenningsi_PA_BR | GAATATATGTGAACCACAATTCACGATTAATGAAAAGGATCCGGTGCCCG | [850] |
| jenningsi_GA_AR | GAAAATATGTGAACCACAATTCACGATTAATGACAAGGACCCGGTGCCTG | [850] |
| jonesi_FL_CC1 | GAATATATGTGAACCACAATTCACGATTAATGAAAAGGAYCCGGTGCCCG | [850] |
| jonesi_AL_BCC | KAAYATATGTGAACCACAATTCACGATTAATGAAAAGGACCCGGTRCCCG | [850] |
| jonesi_NC_CC | KAACATATGTGAACCACAATTCACGATYAATGAAAAGGACCCGGTACCCG | [850] |
| jonesi_NC_QC | KAACATATGTGAACCACAATTCACGATYAATGAAAAGGACCCGGTRCCCG | [850] |
| jonesi_GA_WC | GAACATTTGTGAACCACAATTCACGATTAATGAAAAGGACCCGGTGCCCG | [850] |
| krebsorum_NC_MC | GAATATATGTGAACCACAATTCACGATTAATGAAAAGGATCCGGTGCCCG | [850] |
| krebsorum_SC_CC2 | GAATATATGTGAACCACAATTCACGATTAATGAAAAGGATCCGGTGCCCG | [850] |
| lakei_PA_NC | KAAYATATGTGAACCACAATTCRCGGTAAATGAAAAAGATCCGGTGCCCG | [850] |
| lakei_SC_BR | GAATATWTGTGAACCACAATTCACGRTAAATGAAAAAGATGCGGTGCCCG | [850] |
| lakei_FL_CR | GAATATATGTGAACCACAATTCACGAWTAATGAAAAAGATGCGGTGTCCG | [850] |
| lakei_Taunt_8_MA_TR | GAATATTTGTGAACCACAATTCACGATTAATGAAAAAGATMCGGTGCCCG | [850] |
| lakei_Taunt_9_MA_TR | TAACATATGTGAACCACAATTCACGATTAATGAAAAGGATCCGGTGCCCG | [850] |
| luggeri_NWT | GAATATATGTGAACCACAATTCACGATTAATGACAAAGATCCGGTGCCCG | [850] |
| luggeri_NE_FR | GAATATATGTGAACCACAATTCACGATTAATGAMAAAGATCCGGTGCCCG | [850] |
| luggeri_NC_HR | GAATATATGTGAACCACAATTCACGATWAATGAAAAAGATCCGGTGCCCG | [850] |
| luggeri_KY_GR3 | GAATATATGTGAACCACAATTCACGATTAATGACAAAGATCCGGTGCCCA | [850] |
| 'notiale AL BC5+6' | GAACATATGTGAACCACAATTCACGATCAATGAAAAGGACCCGGTGCCCG | [850] |
| notiale_VA_RR | GAACATATGTGAACCACAATTCACGATCAATGAAAAGGACCCGGTGCCCG | [850] |
| notiale_TN_CC | GAACATATGTGAACCACAATTCACGATCAATGAGAAGGACCCGGTGCCCG | [850] |
| notiale_SC_RBC | GAACATATGTGAACCACAATTCACGATSAATGAAAAGGACCCGGTRCCCG | [850] |
| 'notiale AL BC6+6' | GAACATATGTGAACCACAATTCACGATCAATGAAAAGGACCCGGTGCCCG | [850] |
| nyssa_AL_BC | GAACATATGTGAACCACAATTCACGATTAATGAAAAGGATCTGGTGCCCG | [850] |
| nyssa_ME_AR | GAAYATATGTGAACCACAATTCACGATTAATGAAAAGGATCCGGTGCCCG | [850] |
| nyssa_VA_RR | GAACATATGTGAACCACAATTCACGATTAATGAAAAGGATCTGGTGCCCG | [850] |
| nyssa_ME_PR | GAAYATATGTGAACCACAATTCACGATTAATGAAAAGGATCYGGTGCCCG | [850] |
| nyssa_NC_TR | GAACATATGTGAACCACAATTCACGATTAATGAAAAGGATCYGGTGCCCG | [850] |
| ozarkense_MO_GR2 | RAAYATATGTGAACCACAATTCACGATTAATGAAAAAGATCCGGTGCCCG | [850] |
| ozarkense_MO_GR1 | GAACATATGTGAACCACAATTCACGATTAATGAAAAAGATCCGGTGCCCG | [850] |
| penobsco_ME_PR1 | GAATATATGTGAACCACAATTCACGATTAATGAAAAGGACACGGTGCCCG | [850] |

Appendix 1. (Cont.)

| Taxa | Sequence | Base # |
|---|---|---|
| penobsco_ME_PR2 | GAATATATGTGAACCACAATTCACGATTAATGAAAAGGATCCGGTGCCYG | [850] |
| podostemi_NC_TR | GAATATATGTGAACCACAATTCACGATTAATGAAAAGGACCCGGTGCCCG | [850] |
| podostemi_GA_AS | GAATATATGTGAACCACAATTCACGATTAATGAAAAGGACCCGGTGCCCG | [850] |
| podostemi_MS_BC | GAATATATGTGAACCACAATTCACGATTAATGAAAAGGACCCGGTGCCCG | [850] |
| podostemi_GA_CR | GAATATATGTGAACCACAATTCACGATTAATGAAAAGGACCCGGTGCCCG | [850] |
| remissum_NC_NR2 | GAATATATGTGAACCACAATTCACGATTAATGAAAAGGATCCGGTRCCCG | [850] |
| remissum_NC_NR1 | GAACATATGTGAACCACAATTCACGATTAATGAAAAGGATCCGGTGCCCG | [850] |
| remissum_NC_NR3 | GAACATATGTGAACCACAATTCACGATTAATGAAAAGGATCYGGTRCCCG | [850] |
| 'snowi AL BC 4+6' | GAACATATGTGAACCACAATTCACGATCAATGAAAAGGACCCGRCGCCCG | [850] |
| snowi_TN_CC | GAACATATGTGAACCACAATACACGATCAATGAAAAGGACCCGGTGCCCG | [850] |
| 'snowi AL BC 4+4' | GAACATATGTGAACCACAATTCACGATCAATGAAAAGGACCCGGTGCCCG | [850] |
| taxodium_GA_CC2 | GAATATTTGTGAACCACAATTCACGATTAATGAAAAAGATGCGGTGCCCG | [850] |
| taxodium_FL_CR | GAATATATGTGAACCACAATTCACGATTAATGAAAAGGATCCGGTGCCYG | [850] |
| underhilli_AL_HC3 | GAACATATGTGAACCACAATTCACGATCAATGAAAAGGACCCGGTGCCCG | [850] |
| underhilli_GA_FR | GAACATATGTGAACCACAATTCACGATCAATGAAAAGGACCCGGTGTCCG | [850] |
| underhilli_GA_FS | RAACATATGTGAACCACAATTCACGATCAATGAAAAGGACCCGGTGCCCG | [850] |
| | | |
| tuberosum | TTCAAAGATTAACCGATGCATCAATTATGAAGAAGTATCAGAGTTGCGCC | [900] |
| verecundum | TCCAAAGATTAACCACTTCATCTGTTGTAAAGACGTATAAGAGTTGTGCC | [737] |
| decimatum | TCCAAAGATTAACCGCTGCATCTATTATGAAGAAGTATGAGAGTTCTGCA | [900] |
| apricarium | TCCAAAGATTAACCGCTGCCTCAATTGTGAAAAAGTATGAGAGTTCTGCA | [900] |
| reptans | TYCAAAGATTRACCGCTGCATCAATTGTTAAGAAGTATGAGAGTTGTGCA | [900] |
| anchist_AL_HC | TCCAAAGATTAACCAGTGCATCGATTGTGAAGAAGTATAGCAGTTCTGTT | [900] |
| anchist_DE_DR | TCCAAAKATTAACCAGTGCATCGATTGTGAAGAAGTATAGCAGTTCTGTT | [900] |
| anchist_ME_AR | TCCAAAGATTAACCAGTGCATCGATTGTGAAGAAATATAGCAGTTCTGTT | [900] |
| anchist_NC_NR | TCCAAAGATTAACCAGTGCATCGATTGTGAAGAAATATAGCAGTTCCGTT | [900] |
| anchist_ME_KR | TCCAAAGATTAACCAGTGCATCGATTGTGAAGAAGTATARCAGTTCTGTT | [900] |
| aranti_GA_FS | TCCAAAGATTAACCAGTGCATCGATTGTGAAGAAGTATAACAGTTCTGTT | [900] |
| aranti_GA_AS | TCCAAAGATTAACCAGTGCATCGATTGTGAAGAAGTATAACAGTTCTGTT | [900] |
| aranti_AL_HC | TCCAAAGATTAACCAGTGCATCGATTGTGAAGAAGTATAACAGTTCTGTT | [900] |
| aranti_SC_LR | TCCAAAGATTAACCAGTGCATCGATTGTGAAGAAGTATAACAGTTCTGTT | [900] |
| chlorum_NC_GC3 | TCCAAAGATTAACCAGTGCATCGATTGTGAAGAAGTATAACAGTTCYGTT | [900] |
| chlorum_NC_GC1 | TCCAAAGATTAACCAGTGCATCGATTGTGAAGAAGTATAACAGTTCTGTT | [900] |
| chlorum_NC_GC4 | TYCAAAGATTAACYAGTGCATCGATTGYGAAGAAGTATAACAGTTCTGTT | [900] |
| confusum_TN_LR | TCCAAAGATTAACCAGTGCATCGATTGTGAAGAAGTATAACAGTTCTGTT | [900] |
| confusum_GA_GC | TCCAAAGATTAACCAGTGCATCGATTGTGAAGAAGTATAACAGTTCTGTT | [900] |
| confusum_GA_EC | TCCAAAGATTAACCAGTGCATCGATTGTGAAGAAGTATAACAGTTCTGTT | [900] |
| confusum_TX_SJR | TCCAAAGATTAACCAGTGCATTGATTGYGAAGAAGTATAACAGTTCKGTT | [900] |
| confusum_TX_SR | TCCAAAGATTAACCAGTGCATTGATTGCGAAGAAGTATAACAGTTCTGTT | [900] |
| confusum_TX_Bayou | TCCAAAGAATAACCAGTGCATCGATTGTGAAGAAGTATAACAGTTCTGTT | [900] |
| definitum_PA_LC | TCCAAAGATTAACCAGTGCATCGATTGTGAAGAAGTATAACAGTTCTGTT | [900] |
| definitum_SC_GC | TCCAAAGATTAACCAGTGCATCGATTGTGAAGAAGTATAACAGTTCTGTT | [900] |
| dixiense_GA_WC | TCCAAAGATTAACCACTGCATCAATTGTGAAAAAGTACAACAGTTGTGTT | [900] |
| dixiense_SC_LBC | TCCAAAGATTAACCACTGCATCAATTGTGAAAAAGTACAACWGTTGTGTT | [900] |
| dixiense_NC_QC | TCCAAAGATTAACCACTGCATCAATTGTGAAAAAGTACAACTGTTGTGTT | [900] |
| dixiense_FL_CC | TCCAAAGATTAACCACTGCATCAATTGTGAAAAAGTACAACAGTTGTGTT | [900] |
| fibrinflatum_PA_DR | TCCAAAGATTAACCAGTGCATCGATTATGAAGAAGTATAACAGTTCTGTT | [900] |
| fibrinflatum_ME_AR | TCCAAAGATTAACCAGTGCATCGATTGTGAAGAAGTATAACAGTTCTGTT | [900] |
| fibrinflatum_GA_FR | TCCAAAGATTAACCAGTGCATCGATTGTGAAGAAGTAYAACAGTTCTGTT | [900] |
| haysi_AL_BCC3 | TCCAAAGATTAACCACTGCATCGATTGTGAAGAAGTATAGCAGTTCTGTA | [900] |
| haysi_TX_SJR | TCCAAAGATTAACCACTGCATCGATTGTGAAGAAGTATAGCAGTTCTGTA | [900] |
| infenestrum_NC_RR | TCCAAAGATTAACCAGTGCATCGATTGTGAAGAAGTATAGCAGTTCYRTT | [900] |
| infenestrum_SC_RBC | TCCAAAGATTAACCAGTGCATCGATTGTGAAGAAGTATAGCAGTTCCATT | [900] |
| jenningsi_TN_PR | TCCAAAGATTGACCAGTGCATCGATTGTGAAGAARTACAGCAGTTCTGTT | [900] |
| jenningsi_NC_ER | TCCAAAGATTAACCAGTGCATCGATTGTGAAGAAATATAACAGTTCTGTT | [900] |
| jenningsi_SC_FC | TCCAAAGATTAACCAGTGCATCGATTGTGAAGAAGTATAACAGTTCTGTW | [900] |
| jenningsi_PA_BR | TCCAAAGATTAACCAGTGCATCGATTGTGAAGAAATATAACAGTTCTGTT | [900] |
| jenningsi_GA_AR | TCCAAAGATTAAGCAGTGCATCGATTGTGAAGAAATATAACAGTTCTGTT | [900] |
| jonesi_FL_CC1 | TCCAAAGATTAACCAGTGCATCGATTGTGAAGAAGTATAACAGTTCTGTT | [900] |
| jonesi_AL_BCC | TCCAAAGATTAACCAGTGCATYGATTGYGAAGAAGTATAAYAGTTCTGTT | [900] |

Appendix 1. (Cont.)

| Taxa | Sequence | Base # |
|---|---|---|
| jonesi_NC_CC | TCCAAAGATTAACCAGTGCATCGATTGTGAAGAAGTATAACAGTTCTCTT | [900] |

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jonesi_NC_QC            TCCAAAGATTAACCAGTGCATYGATTGYGAAGAAGTATAAYAGTTCTSTT   [900]
jonesi_GA_WC            TCCAAAGATTAACCAGTGCATCGATTGTGAAGAAGTATAACAGTTCTCTT   [900]
krebsorum_NC_MC         TCCAAAGATTAACCAGTGCATCGATTGTGAAGAAGTATAACAGTTCMGTT   [900]
krebsorum_SC_CC2        TCCAAAGATTAACCAGTGCATCGATTGTGAAGAAGTATAACAGTTCCGTT   [900]
lakei_PA_NC             TCCAAAGATTAACCAGTGCATCGATTGTGAAGAAGTATAACAGTTCTGTT   [900]
lakei_SC_BR             TCCAAAGATTAACCAGTGCATCGATYGTGAAGAAGTATAACRGTTCTGTT   [900]
lakei_FL_CR             TCCAAAGATTAACCAGTGCATCGATTGTGAAGAAGTATAACAGTTCTGTT   [900]
lakei_Taunt_8_MA_TR     TCCAAAGATTAACCAGTGCATCGATTGTGAAGAAGTATAACAGTTCTGTT   [900]
lakei_Taunt_9_MA_TR     TCCAAAGATTAACCAGTGCATCGATTGTGAAGAAGTATAACAGTTCTGTT   [900]
luggeri_NWT             TCCAAAGATTAACCACTGCATCGATTGTCAAGAAGTATAGCAGTTCTGTT   [900]
luggeri_NE_FR           TCCAAAGATTAACCACTGCATCGATTGTCAAGAAGTATAGCAGTTCTGTT   [900]
luggeri_NC_HR           TCCAAAGATTAACCACTGCATCGATTGTCAAGAAGTATAGCAGTTCTGTT   [900]
luggeri_KY_GR3          TCCAAAGATTAACCACTGCATCGATTGTCAAGAAGTATAGCAGTTCTGTT   [900]
'notiale AL BC5+6'      TCCAAAGATTAACCAGTGCATCGATTRTGAAGAAGTAYAACAGTTCTGTT   [900]
notiale_VA_RR           TCCAAAGATTAACCAGTGCATCGATTRTGAAGAAGTATAACAGTTCTGTT   [900]
notiale_TN_CC           TTCAAAGATTAACCAGTGCATCGATTRTGAAGAAGTAYAACAGTTCTGTT   [900]
notiale_SC_RBC          TCCAAAGATTARCCAGTGCATCGATTRTGAAGAAGTAYAACAGTTCTGTT   [900]
'notiale AL BC6+6'      TCCAAAGATTAACCAGTGCATCGATTATGAAGAAGTATAACAGTTCTGTT   [900]
nyssa_AL_BC             TCCAAAGATTAACCTGTGCATCGATTGTGAAGAARTATAGCAGTTCYGTT   [900]
nyssa_ME_AR             TCCAAAGATTAACCTGTGCATCGATTGTGAAGAAGTATAGCAGTTCTGTT   [900]
nyssa_VA_RR             TCCAAAGATTAACCTGTGCATCGATTGTGAAGAAGTATAGCAGTTCTGTT   [900]
nyssa_ME_PR             TCCAAAGATTAACCWGTGCATCGATTGTGAAGAAGTATAGCAGTTCTGTT   [900]
nyssa_NC_TR             TCCAAAGATTAACCWGTGCATCGATTGTGAAGAAGTATAGCAGTTCTGTT   [900]
ozarkense_MO_GR2        TCCAAAGATTAACCAATGCAACGATTGTGAAGAAGTATAACAGTTCTGTT   [900]
ozarkense_MO_GR1        TCCAAAGATTAACCAATGCAACGATTGTGAAGAAGTAYAACAGTTCAGTT   [900]
penobsco_ME_PR1         TCCAAAGATTAACCAGTGCATCGATTGTGAAGAAGTATAGCAGTTCTATT   [900]
penobsco_ME_PR2         TCCAAAGATTAACCAGTGCATCGATTGTGAAGAAGTATAGCAGTTCCATT   [900]
podostemi_NC_TR         TCCAAAGATTAACCAGCGCATCGATTGTGAAGAAGTATAGCAGTTCTGTT   [900]
podostemi_GA_AS         TCCAAAGATTAACCAGCGCATCGATTGTGAAGAAGTATAGCAGTTCTGTT   [900]
podostemi_MS_BC         TCCAAAGATTAACCAGCGCATCGATTGTGAAGAAGTATAGCAGTTCTGTT   [900]
podostemi_GA_CR         TCCAAAGATTAACCAGCGCATCGATTGTGAAGAAGTATAGCAGTTCTGTT   [900]
remissum_NC_NR2         TCCAAAGATTAACCAGTGCATCGATTGTGAAGAAGTATAATAGTTCTGTW   [900]
remissum_NC_NR1         TCCAAAGATTAACCAGTGCATCGATTGTGAAGAAGTATAATAGTTCTGTT   [900]
remissum_NC_NR3         TCCAAAGATTAACCAGTGCATCGATTGTGAAGAAGTATAATAGTTCTGTT   [900]
'snowi AL BC 4+6'       TCCAAAGATTAACCAGTGCATCGATTATGAAGAAGTATAACAGTTCTGTT   [900]
snowi_TN_CC             TCCAAAGATTAACCAGTGCATCTGTTRTGAAGAAGTATAACAGTTCTRTT   [900]
'snowi AL BC 4+4'       TCCAAAGATTAACCAGTGCATCGATTRTGAAGAAGTATAACAGTTCTGTT   [900]
taxodium_GA_CC2         TCCAAAGATTAACTAGTGCATTGATTGYGAAGAAGTATAACAGCTCTGTT   [900]
taxodium_FL_CR          TCCAAAGATTAACCAGTGCATCGATTGTGAAGAAGTATAACAGTTCTGTT   [900]
underhilli_AL_HC3       TCCAAAGATTAACCAGTGCATCGATTRTGAAGAAGTAYAACAGTTCTGTT   [900]
underhilli_GA_FR        TCCAAAGATTAACCAGTGCATCGATAGTGAAGAAGTACAAAAGTTCTGTT   [900]
underhilli_GA_FS        TCCAAAGATTAACCAGTGCATCGATTATGAAGAAGTATAACAGTTCTGTT   [900]


tuberosum               TCAGTTTCCCGAATTTTGTGGCTATCACCGCGACTCTTCGTGGGTCTGCA   [950]
verecundum              ATAGTTTCTCGGCTTTTATGGCTGTCGCCTCGCCTCTTTGTTGGTCTACA   [787]
decimatum               CTCGTTTCTCAGATTTTATGGATATCACCTCGACTCTTCGTGGGTCTGCA   [950]
apricarium              CTCGTTTCTCAGATTTTATGGATATCACCTCGAATTTTCGTGGGTCTGCA   [950]
reptans                 TTCGTGTCTCAGATTTTATGGATATCACCACGACTYTTCGTGGGTCTGCA   [950]
anchist_AL_HC           CCGGTTTCTCGGATTTTATGGCTATCGCCGCAACTCTTTGTGGGTTTGCA   [950]
anchist_DE_DR           CCGGTTTCTCGGATTTTATGGCTATCGCCGCAACTCTTTGTGGGTTTGCA   [950]
anchist_ME_AR           CCGGTTTCTCGGATTTTATGGCTATCGCCGCAACTCTTTGTGGGTTTGCA   [950]
anchist_NC_NR           CCGGTTTCTCGGATTTTATGGCTATCGCCGCAACTCTTTGTGGGTTTGCA   [950]
anchist_ME_KR           CCGGTTTCTCGGATTTTATGGCTATCGCAGCAACTCTTTGTGGGTTTGCA   [950]
aranti_GA_FS            CCAGTTTCTCGGATTTTATGGCTATCGCCGCAACTCTTTGTRGGTTTGCA   [950]
aranti_GA_AS            CCRGTTTCTCGGATTTTATGGCTATCGCCGCAACTCTTTGTAGGTTTGCA   [950]
aranti_AL_HC            CCAGTTTCTCGGATTTTATGGCTATCGCCGCTACTCTTTGTRGGTTTGCA   [950]
aranti_SC_LR            CCRGTTTCTCGGATTTTATGGCTATCGCCGCAACTCTTTTTGGGTTTGCA   [950]
chlorum_NC_GC3          CCGGTTTCYCGGATTTTRTGGCTATCGCCGCAACTCTTTGTGGGTTTGCA   [950]
chlorum_NC_GC1          CCGGTTTCTCGGATTTTATGGCTATCGCCGCAACTCTTTGTGGGTTTGCA   [950]
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Appendix 1. (Cont.)

| Taxa | Sequence | Base # |
|---|---|---|
| chlorum_NC_GC4 | CCTGTTTCTCGGATTTTRTGGCWATCGCCGCAACTCTTTGTRGCTTTGCA | [950] |
| confusum_TN_LR | CCGGTTTCTCGGATTTTGTGGCTATCGCCGCAACTCTTTGTGGGTTTGCA | [950] |
| confusum_GA_GC | CCGGTTTCTCGGATTTTRTGGCTRTCGCCGCAACTCTTTGTAGGTTTRCA | [950] |
| confusum_GA_EC | CCGGTTTCTCGGATTTTATGGYTATCGCCGCAACTCTTTGTGGGTTTGCA | [950] |

| | | |
|---|---|---|
| confusum_TX_SJR | CCGGTTTCTCGGATTTTRTGGCTATCGCCGCAACTCTTTGTRGGTTTGCA | [950] |
| confusum_TX_SR | TCGGTTTCYCGGATTTTGTGGCTATCGCCGCAACTCTTTGTGGGTTTGCA | [950] |
| confusum_TX_Bayou | CCTGTTTCTCGGATTTTATGGCTATCGTCACAGCTCTTTGTGGGTTTGCA | [950] |
| definitum_PA_LC | CCGGTTTCTCGGATTTTGTGGCTATCGCCGCAACTCTTTGTGGGTTTGCA | [950] |
| definitum_SC_GC | CCGGTTTCTCGGATTTTRTGGCTATCGCCRCAACTCTTTGTGGGTTTGCA | [950] |
| dixiense_GA_WC | TCGGTTTCCCGGATTCTATGGCTATCGCCGCAACTCTTTGTGGGTTTGCA | [950] |
| dixiense_SC_LBC | TCGGTYTCCCGGATTCTATGGCTATCGCCGCAACTCTTTGTGGGTTTGCA | [950] |
| dixiense_NC_QC | TCGGTCTCCCGGATTCTATGGCTATCGCCGCAACTCTTTGTGGGTTTGCA | [950] |
| dixiense_FL_CC | TCGGTCTCCCGGATTCTATGGCTATCGCCGCAACTCTTTGTGGGTTTGCA | [950] |
| fibrinflatum_PA_DR | CCGGTTTCTCGGATTCTATGGCTATCGCCTCAACTCTTTGTGGGTTTGCA | [950] |
| fibrinflatum_ME_AR | CCGGTTTCTCGGATTCTATGGCTATCACCGCAACTCTTTGTGGGTTTGCA | [950] |
| fibrinflatum_GA_FR | CCGGTTTCTCGGATTCTATGGCTATCGCCGCAACTCTTTGTGGGTTTGCA | [950] |
| haysi_AL_BCC3 | TCGGTTTCTCGGATTTTATGGCTATCGGCACAACTCTTTGTGGGTTTGCA | [950] |
| haysi_TX_SJR | TCGGTTTCTCGGATTTTATGGCTATCGGCACAACTCTTTGTGGGTTTGCA | [950] |
| infenestrum_NC_RR | CCGGTKTCYCGGATTTTATGGCTATCGTCGCAACTCTTTGTGGGCTTGCA | [950] |
| infenestrum_SC_RBC | CCGGTGTCTCGGATTTTATGGCTATCGTCGCAACTCTTTGTGGGCTTGCA | [950] |
| jenningsi_TN_PR | CCGGTTTCTCGGATTTTATGGCTATCGCCGCAACTCTTTGTGGGTATGCA | [950] |
| jenningsi_NC_ER | CCGGTTTCTAGGATTTTATGGGTATCGCCGCAACTCTTTGTGGGTTTGCA | [950] |
| jenningsi_SC_FC | CCGGTTTCTCGGATTTTATGGCTATCGCCGCAACTCTTTGTGGGTTTGCA | [950] |
| jenningsi_PA_BR | CCGGTTTCTCGGATTTTATGGCTATCGCCGCAACTCTTTGTGGGTTTGCA | [950] |
| jenningsi_GA_AR | CCGGTTTCTCGGATTTTATGGGTATCGCCGCAACTCTTTGTGGGTTTGCA | [950] |
| jonesi_FL_CC1 | CCGGTTTCTCGGATTTTRTGGCTATCGCCGCAACTCTTTGTRGGTTTGCA | [950] |
| jonesi_AL_BCC | CCGGTTTCTCGGATTTTATGGCTATCGCCKCAACTCTTTGTGGGTTTGCA | [950] |
| jonesi_NC_CC | CCGGTTTCTCGGATTTTATGGCTATCGCCGCAACTCTTTGTGGGTTTACA | [950] |
| jonesi_NC_QC | CCGGTTTCTCGGATTTTATGGCTATCGCCGCAACTCTTTGTGGGTTTRCA | [950] |
| jonesi_GA_WC | CCGGTTTCTCGGATTTTATGGCTATCGCCGCATCTCTTTGTGGGTTTGCA | [950] |
| krebsorum_NC_MC | CCGGTTTCTCGGATTTTATGGCTATCACAGCAACTCTTTGTGGGTTTGCA | [950] |
| krebsorum_SC_CC2 | CCGGTTTCTCGGATTTTATGGCTATCACAGCAACTCTTTGTGGGTTTGCA | [950] |
| lakei_PA_NC | CCGGTTTCTCGGATTTTGTGGCTATCGCCGCAAYTCTTTGTGGGTTTRCA | [950] |
| lakei_SC_BR | CCGGTTTCTCGGATTTTGTGGCTATCGCCGCAACTCTTTGTGGGTTTGCA | [950] |
| lakei_FL_CR | CCGGTTTCTCGGATTTTRTGGCTATCGCCGCAACTCTTTGTRGGTTTGCA | [950] |
| lakei_Taunt_8_MA_TR | YCGGTTTCTCGGATTTTGTGGCTRTCGCCGCAACTCTTTGTRGGTTTGCA | [950] |
| lakei_Taunt_9_MA_TR | CCGGTTTCTCGGATTTTATGGCTATCGCCGCAACTCTTTGTGGGTTTACA | [950] |
| luggeri_NWT | CCGGTTTCTCGGATTTTATGGCTATCGCCGCAACTCTTTGTGGGTTTGCA | [950] |
| luggeri_NE_FR | CCGGTTTCTCGGATTTTATGGCTATCGCCGCAACTCTTTGTGGGTTTGCA | [950] |
| luggeri_NC_HR | CCGGTTTCTCGGATTTTATGGCTATCGCCGCAACTCTTTGTGGGTTTGCA | [950] |
| luggeri_KY_GR3 | TCGGTTTCTCGGATTTTATGGCTATCGCCGCAACTCTTTGTGGGTTTGCA | [950] |
| 'notiale AL BC5+6' | CCGGTTTCTCGGATTCTATGGCTRTCRCCRCAACTCTTTGTGGGTTTGCA | [950] |
| notiale_VA_RR | CCGCTTTCTCGGATTCTATGGCTATCACCGCAACTCTTYGTGGGTTTGCA | [950] |
| notiale_TN_CC | CCGGTTTCTCGGATTCTATGGCTATCRCCRCAACTCTTTGTGGGTTTGCA | [950] |
| notiale_SC_RBC | CCGGTTTCTCGGATTCTATGGCTATCGCCGCAAATCTTTGTGGGTTTGCA | [950] |
| 'notiale AL BC6+6' | CCGGTTTCTCGGATTCTATGGCTATCACCACAGCACTTTGTGGGTTTGCA | [950] |
| nyssa_AL_BC | CCGGTTTCTCGGATGTTATGGCTATCGCCGCAACTCTTTGTGGGTTTGCA | [950] |
| nyssa_ME_AR | CCGGTTTCTCGGATGTTATGGCTATCGCCGCAACTCTTTGTGGGTTTGCA | [950] |
| nyssa_VA_RR | CCGGTTTCTCGGATTTTATGGCTATCGCCGCAACTCTTTGTGGGTTTGCA | [950] |
| nyssa_ME_PR | CCGGTTTCTCGGATTTTATGGCTATCGCCGCAACTCTTTGTGGGTTTGCA | [950] |
| nyssa_NC_TR | CCGGTTTCTCGGATTTTATGGCTATCGCCGCAACTCTTTGTGGGTTTGCA | [950] |
| ozarkense_MO_GR2 | CCGGTTTCTCGGATTTTATGGCTATCRCCGCAACTCTTTGTGGGTTTGCA | [950] |
| ozarkense_MO_GR1 | CCGGTTTCTCGGATTTTATGGCTATCGCCGCAACTCTTTGTGGGTTTGCA | [950] |
| penobsco_ME_PR1 | CCGGTGTCTCGGATTTTATGGCTATCGTCGCAACTCTTCGTGGGCTTGCA | [950] |
| penobsco_ME_PR2 | CCGGTGTCTCGGATTTTATGGCTATCGTCGCAACTCTTTGTGGGCTTGCA | [950] |
| podostemi_NC_TR | CCGGTTTCTCGGATTTTATGGCTATCGCCGCATTTCTTTGTGGGTTTGCA | [950] |
| podostemi_GA_AS | CCGGTTTCTCGGATTTTATGGCTATCGCCGCATTTCTTTGTGGGTTTGCA | [950] |
| podostemi_MS_BC | CCGGTTTCTCGGATTTTATGGCTATCGCCGCATTTCTTTGTGGGTTTGCA | [950] |
| podostemi_GA_CR | CCGGTTTCTCGGATTTTATGGCTATCGCCGCATYTCTTTGTGGGTTTGCA | [950] |
| remissum_NC_NR2 | CCGGTTTCTCGGATTTTATGGCTATCACAGCATCTCTTTGTGGGTTTACA | [950] |
| remissum_NC_NR1 | CCGGTTTCTCGGATTTTATGGCTATCACRGCATCTCTTTGTGGGTTTACA | [950] |
| remissum_NC_NR3 | CCGGTTTCTCGGATTTTATGGCTATCACGGCATCTCTTTGTGGGTTTACA | [950] |

Appendix 1. (Cont.)

| Taxa | Sequence | Base # |
|---|---|---|
| 'snowi AL BC 4+6' | CCGGTTTCTCGGATTCTATGGCTATCACCACAGCACTTTGTGGGTTTGCA | [950] |
| snowi_TN_CC | CCGSTTTCTCGGATTCTATGGCTATCGCCGCARCTCTTTGTGGGTTTGCA | [950] |
| 'snowi AL BC 4+4' | CCGGTTTCTCGGATTCTATGGCTATCACCACAGCWCTTTGTGGGTTTGCA | [950] |
| taxodium_GA_CC2 | CCGGTTTCTCGGATTTTATGGCTATCGCCGCAACTCTTTGTAGGTTTGCA | [950] |
| taxodium_FL_CR | CCGGTTTCTCGGATTTTRTGGCTATCGCCGCAACTCTTTGTGGGTTTRCA | [950] |
| underhilli_AL_HC3 | CCGGTTTCTCGGATTCTATGGCTATCGCCGCAAMTCTTTGTGGGTTTGCA | [950] |
| underhilli_GA_FR | CCGGTTTCTCGGATTCTATGGCTATCGCCGCAAATCTTTGTGGGTTTGCA | [950] |

| | | |
|---|---|---|
| underhilli_GA_FS | CCGGTTTCTCGGATTCTATGGCTATCRCCRCARMTCTTTGTGGGTTTGCA | [950] |

| | | |
|---|---|---|
| tuberosum | AGAGAAAAATATCGTTTTATTGCAGGCGGTTGAGGACCAGCTTGAAGTCA | [1000] |
| verecundum | AGATACAAACATCGTTTTATTACAGGCCGTTGAAGACCAGCTCAACGTAA | [837] |
| decimatum | AGAGAAGAATCTTGTTTTGATGCAAGCGGTTGAGGATAAGCTGGAAGTAA | [1000] |
| apricarium | AGAGAAGAATCTTGTTTTATTACAGGCGGTTGAGGATCAGCTGGAAGTAA | [1000] |
| reptans | AGAGAAGAATCTAGTTTTATTGCAGGCGGTTGGGGATCAGCTGGAAGTTA | [1000] |
| anchist_AL_HC | AGAGAAGAACCTCGTTTTATTACAAGCGGTTGATGATCAGCTGGAAGTAA | [1000] |
| anchist_DE_DR | AGAGAAGAACCTCGTTTTATTACAAGCGGTTGATGATCAGCTGGAAGTAA | [1000] |
| anchist_ME_AR | AGAGAAGAACCTCGTTTTATTACAAGCGGTTGATGATCAGCTGGAAGTAA | [1000] |
| anchist_NC_NR | AGAGAARAACTTCGTTTTATTACAAGCGGTTGATGATCARCTGGAAGTAA | [1000] |
| anchist_ME_KR | AGAGAAGAACCTCGTTTTATTACAAGCGGTTGATTATCAGCTGGAAGTAA | [1000] |
| aranti_GA_FS | AGAGAAGAACCTTGTTTTGTTACAAGCGGTCGATGATCAGCTGGAAGTAA | [1000] |
| aranti_GA_AS | AGAGAAGAACCTTGTTTTGTTACAAGCGGTCGATGATCAGCTGGAAGTAA | [1000] |
| aranti_AL_HC | AGAGAAGAACCTTGTTTTGTTACAAGCGGTCGATGATCAGCTGGAAGTAA | [1000] |
| aranti_SC_LR | AGAGAAGAACCTTGTTTTGTTACAAGCGGTCGATGATCAGCTGGAAGTAA | [1000] |
| chlorum_NC_GC3 | AGAGAAGAATCTTGTTTTRTTACAAGYGGTTGATGATCAGCTGGAAATAA | [1000] |
| chlorum_NC_GC1 | AGAGAAGAATCTTGTTTTATTACAAGCGGTTGATGATCAGCTGGAAGTAA | [1000] |
| chlorum_NC_GC4 | AGAGAARAGCCTTGTTTTGTTACAAGCKGTTGATGATCAGCTGGAAGTAA | [1000] |
| confusum_TN_LR | AGAGAAGAACCTTGTTTTRTTACAAGYGGTTGATGATCAGCTGGATRTAA | [1000] |
| confusum_GA_GC | AGAGAAGAACCTTGTTTTATTACAAGCGGTTGATGATCAGCTGGAAGTAA | [1000] |
| confusum_GA_EC | AGAGAAGAACYTTGTTTTRTTACAAGCGGTTAATGATCAGCTGGAAGTAA | [1000] |
| confusum_TX_SJR | AGAGAAGAATCTTGTTTTRTTACAAGCGGTTGATGATCAGCTGGATGTAA | [1000] |
| confusum_TX_SR | AGAGAAGAATCTTGTTTTRTTACAAGCGGTTGATGATCAGCTGGAAGTAA | [1000] |
| confusum_TX_Bayou | AGAGAAGAATCTTGTTTTRTTACAAGCGGTTGATGATCAGCTGGAAGTAA | [1000] |
| definitum_PA_LC | AGAGAAGAACCTTGTTTTGTTACAAGCAGTTGATGATCAGCTGGAAGTAA | [1000] |
| definitum_SC_GC | AGAGAAGAACCTTGTTTTRTTACAAGCRGTTGATGATCAGCTGGAAGTAA | [1000] |
| dixiense_GA_WC | AGAGAAGAACCTTGTTTTATTACAGGCGGTTAATGATACGCTGGAAGTAA | [1000] |
| dixiense_SC_LBC | AGAGAAGAACCTTGTTTTATTACAGGCGGTTAATGATACGCTGGAAGTAA | [1000] |
| dixiense_NC_QC | AGAGAAGAACCTTGTTTTATTACAGGCGGTTAATGATACGCTGGAAGTAA | [1000] |
| dixiense_FL_CC | AGAGAAGAACCTTGTTTTATTACAGGCGGTTAATGATACGCTGGAAGTAA | [1000] |
| fibrinflatum_PA_DR | AGAGAAGAACCTCGTTTTATTACAAGCGGTTGATGATCAGCTGGAAGTAG | [1000] |
| fibrinflatum_ME_AR | AGAGAAGAACCTCGTTTTATTACAAGCGGTTGATGATCAGCTGGAAGTAG | [1000] |
| fibrinflatum_GA_FR | AGAGAAGAACCTCGTTTTATTACAAGCGGTTGATGATCAGCTGGAAGTAG | [1000] |
| haysi_AL_BCC3 | AGGGAAGAATCTTGTTTTATTACAAGCGGTTGATGATCAGCTGGAAGTAA | [1000] |
| haysi_TX_SJR | AGGGAAGAATCTTGTTTTATTACAAGCGGTTGATGATCAGCTGGAAGTAA | [1000] |
| infenestrum_NC_RR | AGAGAAGAACCTTGTTTTATTACAAGCGGWTGATGATCAGCTGGAAGTAA | [1000] |
| infenestrum_SC_RBC | AGAGAAGAACCTTGTTTTATTACAAGTGGTTGATGATCAGCTGGAAGTAA | [1000] |
| jenningsi_TN_PR | AGAGAAGAACCTCGTTTTATTACAAGCGGTTGATGATCAGCTGGAAGTAA | [1000] |
| jenningsi_NC_ER | AGAGAAGAACCTTGTTTTATTACAAGCGGTTGATGATCAGCTGGAAGTAA | [1000] |
| jenningsi_SC_FC | AGAGAAGAACCTTGTTTTATTACAAGCGGTTGATGATCAGCTGGAAGTAA | [1000] |
| jenningsi_PA_BR | AGAGAAGAACCTTGTTTTATTACAAGCGGTTGATGATCAGCTGGACGTAA | [1000] |
| jenningsi_GA_AR | AGAGAAGAACCTTGTTTTATTACAAGCGGTTGATGATCAGCTGGAAGTAA | [1000] |
| jonesi_FL_CC1 | AGAGAAGAATCTTGTTTTRTTACAAGCGGTTGATGATCAGCTGGAAGTAA | [1000] |
| jonesi_AL_BCC | AGAGAAGAATCTTGTTTTRTTACAAGCGGTTGATGATCAGCTGGAAGTWA | [1000] |
| jonesi_NC_CC | AGAGAAGAACCTTGTTTTGTTACAAGCGGTTGATGATCAGCTGGAAGTAA | [1000] |
| jonesi_NC_QC | AGAGAAGAACCTTGTTTTGTTACAAGCGGTTGATGATCAGCTGGAAGTWA | [1000] |
| jonesi_GA_WC | AGAGAAGAATCTTGTTTTATTACAAACGGTTGATGATCAGCTGGAGGTAA | [1000] |
| krebsorum_NC_MC | AGAGAATAATCTTGTTTTATTACAAGCGGTTGATGATCAGCTGGAAGTAA | [1000] |
| krebsorum_SC_CC2 | AGAGAATAATCTTGTTTTATTACAAGCGGTTGATGATCAGCTGGAAGTAA | [1000] |
| lakei_PA_NC | AGAGAAGAACCTTGTTTTRTTACAAGCGGTTGATGATCAGCTGGAAGTAA | [1000] |
| lakei_SC_BR | RGAGAAGAACCTYGTTTTRTTACAAGCGGTTGATGATCAGCTGGAAGTAA | [1000] |
| lakei_FL_CR | AGAGAAGAACCTTGTTTTRTTACAAGCGGTTGATGATCAGCTGGAAGTAA | [1000] |

Appendix 1. (Cont.)

| Taxa | Sequence | Base # |
|---|---|---|
| lakei_Taunt_8_MA_TR | AGAGAAGAACCTYGTTTTATTACAAGCGGTTGATGATCAGCTGGAAGTAA | [1000] |
| lakei_Taunt_9_MA_TR | AGAGAAGAACCTTGTTTTRTTACAAGCGGTTGATGATCAGCTGGAAGTAA | [1000] |
| luggeri_NWT | AGAGAAGAACCTTGTTTTATTGCAAGCGGTTGATGATCAGCTGGAAGTAA | [1000] |
| luggeri_NE_FR | AGAGAAGAACCTTGTTTTATTRCAAGCGGTTGATGATCAGCTGGAAGTAA | [1000] |
| luggeri_NC_HR | AGAGAAGAACCTTGTTTTATTGCAAGCGGTTGATGATCAGCTGGAAGTAA | [1000] |
| luggeri_KY_GR3 | AGAGAAGAACCTTGTTTTATTACAAGCGGTTGATGATCAGCTGGAAGTAA | [1000] |
| 'notiale AL BC5+6' | AGAGAAGAACCTCGTTTTATTACAAGCGGTTGATGATCAGCTGGAAGTAG | [1000] |
| notiale_VA_RR | AGAGAAAAACCTCGTTTTATTACAAGCGGTTGATGATCAGCTGGAAGTAG | [1000] |
| notiale_TN_CC | AGAGAAGAACCTCGTTTTATTACAAGCGGTTGATGATCAGCTGGAAGTAG | [1000] |
| notiale_SC_RBC | AGAGAAGAACCTCGTTTTATTACAAGCGGTTGATGATCAGCTGGAAGTAR | [1000] |

| | | |
|---|---|---|
| 'notiale AL BC6+6' | AGAGAAGAACCTCGTTTTATTACAAGCGGTTGATGATCAGCTGGAAGTAG | [1000] |
| nyssa_AL_BC | AGAGAARAACCTYGTTTTATTACAAGCGGTTGATGATCAGCTGGAAGTAA | [1000] |
| nyssa_ME_AR | AGAGAAGAACCTCGTTTTATTACAAGCGGTTGATGATCAGCTGGAAGTAA | [1000] |
| nyssa_VA_RR | AGAGAAGAACCTCGTTTTATTACAAGCGGTTGATGATCAGCTGGAAGTAA | [1000] |
| nyssa_ME_PR | AGAGAAGAACCTCGTTTTATTACAAGCGGTTGATGATCASCTGGAAGTAA | [1000] |
| nyssa_NC_TR | AGAGAAGAACCTCGTTTTATTACAAGCGGTTGATGATCAGCTGGAAGTAA | [1000] |
| ozarkense_MO_GR2 | AGAGAAGAACCTTGTGTTATTACAAGCGGTTGATGATCAGCTGGAAGTAA | [1000] |
| ozarkense_MO_GR1 | AGAGAAGAACCTTGTGTTATTACAAGCGGTTGATGATCAGCTGGAAGTAA | [1000] |
| penobsco_ME_PR1 | AGAGAAGAACCTCGTTTTATTACAAGCGGTTGATGATCAGCTGGAAGTAA | [1000] |
| penobsco_ME_PR2 | AGAGAAGAACCTTGTTTTATTACAAGTGGYTGATGATCAGCTGGAAGTAA | [1000] |
| podostemi_NC_TR | AGAGAAGAACCTCGTTTTATTACAAGCGGTTGATGATCAGTTGGAAGTAA | [1000] |
| podostemi_GA_AS | AGAGAAGAACCTCGTTTTATTACAAGCGGTTGATGATCAGTTGGAAGTAA | [1000] |
| podostemi_MS_BC | AGAGAAGAACCTCGTTTTATTACAAGCGGTTGATGATCAGTTGGAAGTAA | [1000] |
| podostemi_GA_CR | AGAGAAGAACCTCGTTTTATTACAAGCGGTTGATGATCAGTTGGAAGTAA | [1000] |
| remissum_NC_NR2 | AGAGAAGAACCTCGTTTTATTACAAGCGGTTGATGATCAGCTGGAAGCAA | [1000] |
| remissum_NC_NR1 | AGAGAAGAACCTCGTGTTATTACAAGCGGTTGATGATCAGCTGGAAGTAA | [1000] |
| remissum_NC_NR3 | AGAGAAGAACCTCGTKTTATTACAAGCGGTTGATGATCAGCTGGAAGYAA | [1000] |
| 'snowi AL BC 4+6' | AGAGAAGAACCTCGTTTTATTACAAGCGGTTGATGATCAGCTGGAAGTAG | [1000] |
| snowi_TN_CC | AGAGAAGAACCTCGTTTTATTACAAGCGGTTGATGATCAGCTGGAAGTAG | [1000] |
| 'snowi AL BC 4+4' | AGAGAAGAACCTCGTTTTATTACAAGCGGTTGATGATCAGCTGGAAGTAG | [1000] |
| taxodium_GA_CC2 | AGAGAAGAACCTTGTTTTGTTACAAGCTGTTGATGATCAGCTGGAAGTAA | [1000] |
| taxodium_FL_CR | AGAGAAGAATCTTGTTTTATTACAAGCGKTYGATGATCAGCTGRAAGTAA | [1000] |
| underhilli_AL_HC3 | AGAGAAGAACCTCGTTTTATTACAAGCGGTTGATGATCAGCTGGAAGTAR | [1000] |
| underhilli_GA_FR | AGAGAAGAACCTCGTTTTATTACAAGCGGTTGATGATCAGCTGGAAGTAG | [1000] |
| underhilli_GA_FS | AGAGAAGAACCTCGTTTTATTACAAGCGGTTGATGATCAGCTGGAAGTAG | [1000] |

| | | |
|---|---|---|
| tuberosum | TCGACGTCTGTAAAYTGAGYGACTCGACCGTTGTGAYAATGCAGGCCCAC | [1050] |
| verecundum | TTGACGTCTGTAGCCTGAGCGACACGACAGTTGTGGCAATGCAGGCCCAC | [887] |
| decimatum | TCGACGTCTGTGGACTGGACGACACGACTGTTGTAGCAATGCAAGCCCAC | [1050] |
| apricarium | TCGACGTCTGTAGTTTGGACGACTCGACTGTTGTAGCAATGCAAGCCCAC | [1050] |
| reptans | TCGACGTCTGTGGACTGGCCGACTCGACTGTTGTAGCAATGCAAGSCCAC | [1050] |
| anchist_AL_HC | TCGACGTCTGTAGCCTGGACGACACGACGGTTGTAGCAATGCAAGCCAAC | [1050] |
| anchist_DE_DR | TCGACGTCTGTAGCCTGGACGACACGACGGTTGTAGCAATGCAAGCCAAC | [1050] |
| anchist_ME_AR | TCGACGTCTGTAGCCTGGACGACACGACGGTTGTAGCAATGCAAGCCAAC | [1050] |
| anchist_NC_NR | TCGACGTCTGTAGCCTGGACGACACGACGGTTGTAGCAATGCAAGCCAAC | [1050] |
| anchist_ME_KR | TCGACGTCTGTAGCCTGGACGACACGACGGTTGTAGCAATGCAAGCCAAC | [1050] |
| aranti_GA_FS | TCGACGTCTGCAATCTAGACGACACGAYGGTTGTAGCAATGCAAGCCAAC | [1050] |
| aranti_GA_AS | TCGACGTCTGCAATCTAGACGACACGAYGGTTGTAGCAATGCAAGCCAAC | [1050] |
| aranti_AL_HC | TCGACGTCTGCAATCTAGACGACACGAYGGTTGTAGCAATGCAAGCCAAC | [1050] |
| aranti_SC_LR | TCGACGTCTGCAATCTAGACGACACGAYGGTTGTAGCAATGCAAGCCAAC | [1050] |
| chlorum_NC_GC3 | TCGACGTCTGTGGCCTGGACGACACGACAGTTGTAGCAATGCAAGCCAAC | [1050] |
| chlorum_NC_GC1 | TCGAYGTCTGTAGCCTGGACAACACGACGGTTGTAGCAATGCAAGCCAAC | [1050] |
| chlorum_NC_GC4 | TCGACGTCTGTAGCCTGGACGACACGACGGTTGTAGCAATGCAAGCCAAC | [1050] |
| confusum_TN_LR | TCGACGTCTGTAGCCTGGACGACACGACAGTTGTWGCAATGCAAGCCAAC | [1050] |
| confusum_GA_GC | TCGACGTCTGTGGCCTGGACGACACGACAGTTGTAGCAATGCAAGCCAAC | [1050] |
| confusum_GA_EC | TCGACGTCTGTAGCCTGGACAACACGACGGTTGTAGCAATGCAAGCCAAC | [1050] |
| confusum_TX_SJR | TCGACGTCTGTAGCCTGGACGACACGACAGTTGTAGCAATGCAAGCCAAC | [1050] |
| confusum_TX_SR | TCGACGTCTGTRGCCTGGACGACACGACAGTTGTAGCAATGCAAGTCAAC | [1050] |
| confusum_TX_Bayou | TCGACGTCTGTRGCCTGGACGACACGACAGTTGTAGCCATGCAAGCCAAC | [1050] |
| definitum_PA_LC | TCGACGTCTGCAGCCTGGACAACACGACGGTTGTAGCAATGCAAGTCAAC | [1050] |

Appendix 1. (Cont.)

| Taxa | Sequence | Base # |
|---|---|---|
| definitum_SC_GC | TCGACGTCTGYAGCCTGGACRACACGACRGTTGTAGCMATGCAAGYCAAC | [1050] |
| dixiense_GA_WC | TCGACGTCTGTAGCCTAGATGATACGACAGTTGTAGCAATGCAAGCCAAT | [1050] |
| dixiense_SC_LBC | TCGACGTCTGTAGCCTAGATGACACGACAGTTGTAGCAATGCAAGCCAAT | [1050] |
| dixiense_NC_QC | TCGACGTCTGTAGCCTAGATGATACGACAGTTGTAGCAATGCAAGCCAAT | [1050] |
| dixiense_FL_CC | TCGACGTCTGTAGCCTAGATGATACGACAGTTGTAGCAATGCAAGCCAAT | [1050] |
| fibrinflatum_PA_DR | TCGACGTCTGTAGCCTGGACGACACGACGGTTGTAGCTATGCAAGCAAAC | [1050] |
| fibrinflatum_ME_AR | TTGACGTCTGTAGCCTGGACGACACGACGGTTATAGCTATGCAAGCAAAC | [1050] |
| fibrinflatum_GA_FR | TYGACGTCTGTAGCCTGGACGACACGACAGTTGTAGCTATGCAAGCAAAC | [1050] |
| haysi_AL_BCC3 | TCGACGTCTGTAGCCTGGACGACACGACAGTTGTAGCCATGCAAGCCAAY | [1050] |
| haysi_TX_SJR | TCGACGTCTGTAGCCTGGACGACACGACAGTTGTAGCCATGCAAGCCAAC | [1050] |
| infenestrum_NC_RR | TCGACGTCTGCAGCCTGGACGACACGACGGTTGTTGCAATGCAAGCYAAC | [1050] |
| infenestrum_SC_RBC | TCGACGTCTGCAGCCTGAACGACACGACGGTTGTTGCAATGCAAGCTAAC | [1050] |
| jenningsi_TN_PR | TCGACGTCTGTAGCCTTGACGACACGACAGTTGTAGCAATGCAAGCTAAC | [1050] |

| | | |
|---|---|---|
| jenningsi_NC_ER | TCGACGTCTGTAGCCTGGACGACACGACGGTTGTAGCAATGCAAGCCAAC | [1050] |
| jenningsi_SC_FC | TCGACGTCTGTAGCCTGGACGACWCGACAGTTGTAGCAATGCAAGCYAAC | [1050] |
| jenningsi_PA_BR | TCGACGTCTGTAGCCTGGACGACACGACAGTTGTAGCAATGCAAGCTAAC | [1050] |
| jenningsi_GA_AR | TCGACGTCTGTAGCCTTGACAACACGACAGTTGTAGCAATGCAAGCTAAC | [1050] |
| jonesi_FL_CC1 | TCGACKTCTGTAGCCTGGACGACACGACAGTTGTAGCAATGCAAGCAAAC | [1050] |
| jonesi_AL_BCC | TCGACGTCTGTAGCCTGGACGACACGACAGTTGTAGCAATGCAAGCCAAC | [1050] |
| jonesi_NC_CC | TCGACGTCTGTAGCCTGGACGACACGACAGTTGTAGCAATGCAAGCCAAC | [1050] |
| jonesi_NC_QC | TCGACGTCTGTAGCCTGGACGACACGACAGTTGTAGCAATGCAAGCCAAC | [1050] |
| jonesi_GA_WC | TCGACGTCTGTAGCCTGGACGACACGACAGTTGTAGCAATGCAAGCCAAC | [1050] |
| krebsorum_NC_MC | TCGACGTCTGTAGCCTGGAGGACACGACGGTTGTGGCAATGCAAGCCAAC | [1050] |
| krebsorum_SC_CC2 | TCGACGTCTGTAGCCTGGAGGACACGACGGTTGTGGCAATGCAAGCCAAC | [1050] |
| lakei_PA_NC | TCGACGTCTGTGGCCTGGACAACACGACGGTTGTAGCAATGCAAGCCAAC | [1050] |
| lakei_SC_BR | TCGACGTCTGTAGCCTGGACGACACRACAGTTGTWGCAATGCAAGCCAAC | [1050] |
| lakei_FL_CR | TCGACGTCTGTAGCCTGGACGACACGACAGTTGTAGCAATGCAAGCCAAC | [1050] |
| lakei_Taunt_8_MA_TR | TCGACGTCTGTRACCTGGACGACACGACWGTTGTAGCAATGCAAGCCAAC | [1050] |
| lakei_Taunt_9_MA_TR | TCGACGTCTGTAGCGTGGAAGACACGACAGTTGTAGCAATGCAAGCCAAC | [1050] |
| luggeri_NWT | TCGACGCCTGTAGTTTGGACGACACGACAGTTGTAGCAATGCAAGCCAAC | [1050] |
| luggeri_NE_FR | TCGACGCCTGTAGTTTGGACGACACGACAGTTGTAGCAATGCAAGCCAAC | [1050] |
| luggeri_NC_HR | TCGACGTCTGTAGTTTGGACGACACGACAGTTGTAGCAATGCAAGCCAAC | [1050] |
| luggeri_KY_GR3 | TCGACGTCTGTWGTTTGGACGACACGACAGTTGTAGCAATGCAAGCAAAC | [1050] |
| 'notiale AL BC5+6' | TCGACGTCTGTAGCCTGGACGACACGACAGTTGTAGCTATGCAAGCAAAC | [1050] |
| notiale_VA_RR | TCGACGTCTGTAGCCTGGACGACACGACAGTTGTAGCTATGCAAGCAAAC | [1050] |
| notiale_TN_CC | TCGACGTCTGTAGCCTGGACGACACGACAGTTRTAGCTATGCAAGCAAAC | [1050] |
| notiale_SC_RBC | TCGACGTCTGTAGCCTGGACGACACGACAGTTGTAGCTATGCAAGCAAAC | [1050] |
| 'notiale AL BC6+6' | TCGACGTCTGTAGCCTGGACGACACGACAGTTGTAGCTATGCAAGCAAAC | [1050] |
| nyssa_AL_BC | TCGACGTCTGYAGCCTGGACGACACGACGGTTGTAGCAATGCAAGCCAAC | [1050] |
| nyssa_ME_AR | TCGACGTCTGTAGCCTGGACGACACGACGGTTGTAGCAATGCAAGCCAAC | [1050] |
| nyssa_VA_RR | TCGACGTCTGTAGCCTGGATGACACGACGGTTGTAGCAATGCAAGCCAAC | [1050] |
| nyssa_ME_PR | TCGACGTCTGTAGYCTGGACGACACGACGGTTGTAGCAATGCAAGCCAAC | [1050] |
| nyssa_NC_TR | TCGACGTCTGTAGCCTGGACGACACGACGGTTGTAGCAATGCAAGCCAAC | [1050] |
| ozarkense_MO_GR2 | TCGACGTCTGTAGCCTAGATGATACGACGGTTGTGGCAATGCAAGCCAAC | [1050] |
| ozarkense_MO_GR1 | TCGACGTCTGTAGCCTAGATGATACGACGGCTGTGGCAATGCAAGCCAAC | [1050] |
| penobsco_ME_PR1 | TCGACGTCTGCAGCCTCGACGACACGACGGTTGTTGCAATGCAAGCCAAT | [1050] |
| penobsco_ME_PR2 | TCGACGTCTGCAGCCTGGACGACACGACGGTTGTAGCAATGCAAGCTAAC | [1050] |
| podostemi_NC_TR | TCGACGTCTGCAGCCTGGACGACACGACGGTTGTAGCAATGCAAGCCAAC | [1050] |
| podostemi_GA_AS | TCGACGTCTGCAGCCTGGACGACACGACGGTTGTAGCAATGCAAGCCAAC | [1050] |
| podostemi_MS_BC | TCGACGTCTGCAGCCTGGACGACAYGACGGTTGTAGCAATGCAAGYCAAC | [1050] |
| podostemi_GA_CR | TCGACGTCTGCAGCCTGGACGACACGACGGTTGTAGCAATGCAAGCCAAC | [1050] |
| remissum_NC_NR2 | TCGACGTCTGTAGCCTGGATGACACGACGGTTGTGGCAATGCAAGCAAAC | [1050] |
| remissum_NC_NR1 | TCGACGTCTGTAGCCTGGATGACACGACGGTTGTTGCAATGCAAGCAAAC | [1050] |
| remissum_NC_NR3 | TCGACGTCTGTAGCCTGGATGACACGACGGTTGTTGCAATGCAAGCAAAC | [1050] |
| 'snowi AL BC 4+6' | TCGACGTCTGTAGCCTGGACGACACGACAGTTGTAGCTATGCAAGCAAAC | [1050] |
| snowi_TN_CC | TYGACGTCTGTAGCCTGGACGACACGACRGTTRTAGCTATGCAAGCAAAC | [1050] |
| 'snowi AL BC 4+4' | TCGACGTCTGTAGCCTGGACGACACGACAGTTGTAGCTATGCAAGCAAAC | [1050] |
| taxodium_GA_CC2 | TCGACGTCTGTAGCCTGGACGACACGACAGTTGTAGCAATGCAAGCCAAC | [1050] |
| taxodium_FL_CR | TYGACGTCTGTAGCCTGGATGACACGACAGTTGTAGCAATGCAAGCCAAC | [1050] |
| underhilli_AL_HC3 | TCGACGTCTGYAGCCTGGACGACACGACAGTTGTAGCTATGCAAGCAAAC | [1050] |
| underhilli_GA_FR | TCGACGTCTGTAGCCTGGACGACACGACRGTTGTAGCTATGCAAGCAAAC | [1050] |
| underhilli_GA_FS | TCGACGTCTGTAGCCTGGACGACACGACAGTTGTAGCTATGCAAGCAAAC | [1050] |

Appendix 1. (Cont.)

| Taxa | Sequence | Base # |
|---|---|---|
| tuberosum | AATAACGTTGTTTATTTTCAAACTTTGACCGGGACCGTACAAATGGTTGA | [1100] |
| verecundum | AATAACGTAGTTTATTTTCAAACTTTGACCGGGACCGTACAAATGGTTGA | [937] |
| decimatum | AATAACGTGGTTTATTTTCAAACTTTGACCGGTATCGTACAGATGGTTGA | [1100] |
| apricarium | AATAACGTTGTTTATTTCCAAACTTTGACCGGGATCGTACAGATGGTTGG | [1100] |
| reptans | AATAACWATGTTTATTTCCAAACTTTGACCGGGACAGTGCAGATGGTTGA | [1100] |
| anchist_AL_HC | AACAACGTCGTTTATATTCAAACTTTGACCGGAAYCGTCCAGAAGGTTGA | [1100] |
| anchist_DE_DR | AACAACGTCGTTTATTTTCAAACTTTGACCGGAACCGTCCAGAAGGTTGA | [1100] |
| anchist_ME_AR | AACAACGTCGTTTATTTTCAAACTTTGACCGGAACCGTCCAGAAGGTTGA | [1100] |
| anchist_NC_NR | AACAACGTCGTTTATTTTCAAACTTTGACCGGAACCGTCCAGAAGGTTGA | [1100] |
| anchist_ME_KR | AACAACGTCGTTTATTTCCAAACTTTGACCGGAACCGTCCAGAAGGTTGA | [1100] |
| aranti_GA_FS | AATAACGTTGTTTATTTCCAAACTTTGACCGGAGCCGTCCAGATGGTTGA | [1100] |
| aranti_GA_AS | AATAACGTTGTTTATTTCCAAACTTTGACCGGAGCCGTCCAGATGGTTGA | [1100] |
| aranti_AL_HC | AATAACGTTGTTTATTTCCAAACTTTAACCGGAGCCGTCCAGATGCTTGA | [1100] |
| aranti_SC_LR | AATAACGTTGTTTATTTCCAAACTTTRACCGGAGCCGTACAGATGSTTGA | [1100] |
| chlorum_NC_GC3 | AATAACGCTGTTTATTTCCAAACTTTGATCGGTACCGTCCAGATGGTTGA | [1100] |
| chlorum_NC_GC1 | AATTACGTTGTTTATTTTCAAACTTTGACCGGAATCGTGCAGATGGTTGA | [1100] |

| | | |
|---|---|---|
| chlorum_NC_GC4 | AATAACGCTGTTTATTTCCAAACTTTGACCGGTACCGTGCAGATGGTTGA | [1100] |
| confusum_TN_LR | AATAACGCTGTTTATTTTCAAACTTTGACCGGTACCGTSCAGATGGTTGA | [1100] |
| confusum_GA_GC | AATAACGCTGTTTATTTCCAAACTTTGACCGGTACCGTGCAGATGGTTGA | [1100] |
| confusum_GA_EC | AATAACGYTGTTTATTTTCAAACTTTGACCGGWAYCGTGCAGATGGTTGA | [1100] |
| confusum_TX_SJR | AATAACGCTGTTTATTTCCAAACTTTGACCGGTACCGTGCAGATGGTTGA | [1100] |
| confusum_TX_SR | AATAACGCTGTTTATTTCCAAACTTTGACCGGTACCGTCCAGATGGTTGA | [1100] |
| confusum_TX_Bayou | AATAACGCTGTTTATTTCCAAACTTTGACCGGTACCGTGCAGATGGTTGA | [1100] |
| definitum_PA_LC | AATAACGCTGTTTATTTCCAAACTTTGACCGGAACCGTGCATATGGTTGA | [1100] |
| definitum_SC_GC | AATAACGCTGTTTATTTCCAAACTTTGACCGGAACCGTGCAKATGGTTGA | [1100] |
| dixiense_GA_WC | AATAACGTTGTTTACTTCCAAACTTTGACCGGAACCGTTCAGATGGTTGA | [1100] |
| dixiense_SC_LBC | AATAACGTTGTTTACTTCCAAACTTTGACCGGAACCGTTCAGATGGTTGA | [1100] |
| dixiense_NC_QC | AATAACGTTGTTTACTTCCAAACTTTGACCGGAACCGTTCAGATGGTTGA | [1100] |
| dixiense_FL_CC | AATAACGTTGTTTACTTCCAAACTTTGACCGGAACCGTTCAGATGGTTGA | [1100] |
| fibrinflatum_PA_DR | AACAACATTGTTTATTTCCAAACTATAACCGGAACCGTCCAGAAGGTTGA | [1100] |
| fibrinflatum_ME_AR | AACAACATTGTTTATTTCCAAACTTTAACCGGAACCGTCCAGAAGGTTGA | [1100] |
| fibrinflatum_GA_FR | AACAACRTTGTTTATTTCCAAACTTTAACCGGAACCGTCCAGAAGGTTGA | [1100] |
| haysi_AL_BCC3 | GAAAACGTTGTTTATTTCCAAACTTTGACCGGAAACGTCCAGATGGTTGA | [1100] |
| haysi_TX_SJR | GAAAACGTTGTTTATTTCCAAACTTTGACCGGAAACGTCCAGATGGTTGA | [1100] |
| infenestrum_NC_RR | AAYAACGTTGTTTATTTCCAAACTTTGWCCGGAACCGTCCAGAAGGTTGA | [1100] |
| infenestrum_SC_RBC | AATAACGTTGTTTATTTCCAAACTTTGACCGGAACCGTCCAGAAGGTTGA | [1100] |
| jenningsi_TN_PR | AATAACGCTGTTTATTTCCAAACTTTGACCGGAACCGTCCAGATGGTTGA | [1100] |
| jenningsi_NC_ER | AATAATGTTGTATATTTCCAAACTTTGACCGGAAACGTCCAGAAGGTTGA | [1100] |
| jenningsi_SC_FC | AATAACGYTGTATATTTCCAAACTTTGWCCGGAATCGTGCAGAAGGTTGA | [1100] |
| jenningsi_PA_BR | AATAACGCTGTTTATTTCCAAACTTTGACCGGAAACATCAAGAAGGTAGA | [1100] |
| jenningsi_GA_AR | AATAACGCTGTTTATTTCCAAACTTTGACCGGAACCGTCCAGATGGTTGA | [1100] |
| jonesi_FL_CC1 | AATAACGCTGTTTATTTCCAAACTTTGACCGGTACCGTGCAGATGGTTGA | [1100] |
| jonesi_AL_BCC | AATAACGCTGTTTATTTCCAAACTTTGACCGGTAMCGTGCAGATGGTTGA | [1100] |
| jonesi_NC_CC | AATAACGCTGTTTATTTCCAAACTTTGACTGGTAACGTGCAGATGGTTGA | [1100] |
| jonesi_NC_QC | AATAACGCTGTTTATTTCCAAACTTTGACYGGTAACGTGCAGATGGTTGA | [1100] |
| jonesi_GA_WC | AATAACGCTGTTTATTTCCAAACTTTGACCGGTACCGTGCAGATGGTTGC | [1100] |
| krebsorum_NC_MC | AATAACGCTGTTTATTTCCAAACTTTGACCGGACCCGTCCAGATGGTTGA | [1100] |
| krebsorum_SC_CC2 | AATAACGCTGTTTATTTCCAAACTTTGACCGGACCCGTCCAGATGGTTGA | [1100] |
| lakei_PA_NC | AATAACGTTGTTTATTTTCAAACTTTGGCCGGAACCGTGCAGATGGTTGA | [1100] |
| lakei_SC_BR | AATAACGYTGTTTATTTTCAAACTTTGACCGGWAMCGTCCASATGGTTGA | [1100] |
| lakei_FL_CR | AATAACGCTRTTTATTTCCAAACTTTGACCGGTACCGTSCAGATGGTTGA | [1100] |
| lakei_Taunt_8_MA_TR | AATAACGCTGTTTATTTCCAAACTTTGACCGGTATCGTGCAGATGGTTGA | [1100] |
| lakei_Taunt_9_MA_TR | AATAACGTTGTTTATTTCCAAACTTTGACCGGAAACGTSCAGATGGTTGA | [1100] |
| luggeri_NWT | AATAACGTAGTTTATTTCCAAACTTTGACCGGAACCGTCCAGGAGGTTGA | [1100] |
| luggeri_NE_FR | AATAACGYWGTTTATTTCCAAACTTTGACCGGAGCCGTCCAGRAGGTTGA | [1100] |
| luggeri_NC_HR | AATAACGTAGTTTATTTCCAAACTTTGACCGGAACCGTCCAGGAGGTTGA | [1100] |
| luggeri_KY_GR3 | AATAACGCTGTTTATTTCCAAACTTTGACCGGAACCGTCCAGAAGGTTGA | [1100] |
| 'notiale AL BC5+6' | AACAACRTTGTTTATTTCCAAACTTTAACCGGAACCGTCCAGAAGGTTGA | [1100] |
| notiale_VA_RR | AACAACATTGTTTATTTCCAAACTATAACCGGAACCGTCCAGAAGGTTGA | [1100] |
| notiale_TN_CC | AACAACRTTGTTTATTTCCAAACTTTAACCGGAACYGTCCAGAAGGTTGA | [1100] |
| notiale_SC_RBC | AACAACRTTGTTTATTTCCAAACTTTAAYCGGAACCGTCCAGAAGGTTGA | [1100] |
| 'notiale AL BC6+6' | AACAACGTTGTTTATTTCCAAACTTTAACCGGAACTGTCCAGAAGGTTGA | [1100] |

Appendix 1. (Cont.)

| Taxa | Sequence | Base # |
|---|---|---|
| nyssa_AL_BC | AACAACGTCATTTATTTYCAAATTTTGACCGGAACCGTCCAGAAGGTTGA | [1100] |
| nyssa_ME_AR | AACAACGTCGTTTATTTTCAAAYTTTGACCGGAACCGTCCAGAAGGTTGA | [1100] |
| nyssa_VA_RR | AACAACGTCGTTTATTTTCAAACTTTGACCGGAACCGTCCAGAAGGTTGA | [1100] |
| nyssa_ME_PR | AACAACGTCGTTTATTTTCAAAYTTTGACCGGAACCRTCCAGAAGGTTGA | [1100] |
| nyssa_NC_TR | AACAACGTCGTTTATTTTCAAAYTTTGACCGGAACCRTCCAGAAGGTTGA | [1100] |
| ozarkense_MO_GR2 | AATAACGTTGTTCATTATCAAACTTTGACCGGAACCGTCCAGATGGTTGA | [1100] |
| ozarkense_MO_GR1 | AATAACGTTGTTTATTATCAAACTTTGACCGGAACCGTCCAGATGGTTGA | [1100] |
| penobsco_ME_PR1 | AACAACGTTGTTTGTTTCCAAACTTTGACCGGAATCGTCCAGAAGGTTGA | [1100] |
| penobsco_ME_PR2 | AMTAACGTTGTTYATTTCCAAACTTTGACYGGAACCGTCCAGAAGGTTGA | [1100] |
| podostemi_NC_TR | AATAACGCTGTTTATTTCCAAACTTTGACCGGAACCTTCCAGAAGGTTGA | [1100] |
| podostemi_GA_AS | AATAACGCTGTTTATTTCCAAACTTTGACCGGAACCTTCCAGAAGGTTGA | [1100] |
| podostemi_MS_BC | AATAACGCTGTTTATTTCCAAACTTTGGCCGGAACCTTCCAGAAGGTTGA | [1100] |
| podostemi_GA_CR | AATAACGCTGTTTATTTCCAAACTTTGRCCGGAACCTTCCAGAAGGTTGA | [1100] |
| remissum_NC_NR2 | AACAACGTTGTTTATTTCCAAACTTTGACCGGAACCGTCCAGAAGGTTGA | [1100] |
| remissum_NC_NR1 | AACAACGTTGTTTATTTCCAAACTTTGACCGGAACCGTCCAGAAGGTTGA | [1100] |
| remissum_NC_NR3 | AAYAACGTTGTTTATTTCCAAACTTTGACCGGAACCGTCCAGAAGGTTGA | [1100] |
| 'snowi AL BC 4+6' | AACAACGTTGTTTATTTCCAAACTTTAACCGGAACTGTCCAGAAGGTTGA | [1100] |
| snowi_TN_CC | AACAACRTTGTTTATTTCCAAACTTTAACCGGAACYGTCCAGAAGGTTGA | [1100] |
| 'snowi AL BC 4+4' | AACAACATTGTTTATTTCCAAACTTTAACCGGAACCGTCCAGAAGGTTCA | [1100] |

| | | |
|---|---|---|
| taxodium_GA_CC2 | AATAACGCTGTTTATTTCCAAACTTTGACCGGTACCGTGCAGATGGTTGA | [1100] |
| taxodium_FL_CR | AATAACGCTGTTTATTTCCAAACTTTGACCGGTRYCGTGCAGATGGTTGA | [1100] |
| underhilli_AL_HC3 | AACAACRTTGTTTATTTCCAAACTTTAACCGGAACCGTCCAGAAGGTTGA | [1100] |
| underhilli_GA_FR | AACAACRTTGTTTATTTCCAAACTTTAASCGGAACCGTCCAGAAGGTTGA | [1100] |
| underhilli_GA_FS | AACAACGTTGTTTATTTCCAAAYTTTAACCGGAACYGTCCAGAAGGTTGA | [1100] |

| | | |
|---|---|---|
| tuberosum | GATTCAAACCGACAACAAACTATCCAAACCAGAAACGCTGTACGAATTAC | [1150] |
| verecundum | GATTCAGTCTGACAACAAACTATCGAACCCAGAATCGCTGTACGAATTGC | [987] |
| decimatum | GGTTAAGGCCGACAACAAACTATCCAACCCAGAAACGCTATACGAATTGC | [1150] |
| apricarium | GATTCAGACCGACAACAAACTATCAAACCCAGAAACGCTGTACGAATTGC | [1150] |
| reptans | GATTCAGTCCGACAACAAACTRTCAAACCCAGAAACRCTGTACGAATTGC | [1150] |
| anchist_AL_HC | GATTCAGGCCGACAACAAATTGTCAAACCCAGAAACGCTGTACGAATTGT | [1150] |
| anchist_DE_DR | GATTCAGGCCGACAACARAYTGTCAAACCCAGAAACGCTGTACGAATTGT | [1150] |
| anchist_ME_AR | GATTCAGGCCGACAACAAATTGTCAAACCCAGAAACGCTGTATGAATTGC | [1150] |
| anchist_NC_NR | GATTCAGGCCGACAACAAATTGTCAARCCCAGAAACGCTGTAYGAATTGC | [1150] |
| anchist_ME_KR | GATTCAGGCCGACAACAAACTGTCAAGCCCAGAAACGCTGTACGAATTGC | [1150] |
| aranti_GA_FS | AATTCAGACCGACAACAAACTGTCAAACCTAGAAACGCTGTACGAATTGC | [1150] |
| aranti_GA_AS | AATTCAGACCGACAACAAACTGTCAAACCTAGAAACGCTGTACGAATTGC | [1150] |
| aranti_AL_HC | AATTCAGACCGACAACAAACTRTCAAACCTAGAAACGCTGTACGAATTGC | [1150] |
| aranti_SC_LR | AATTCAGACCGACAACAAACTRTCAGACCYAGAAACGCTGTACGAATTGC | [1150] |
| chlorum_NC_GC3 | GATTCAGACTGACAACAAATTGTCAAGCCCAGAAACGCTGTATGAATTAC | [1150] |
| chlorum_NC_GC1 | GATTCAGACCGACAAAAAATTGTCAAGCCCAGAAACGCTGTACGAATTGC | [1150] |
| chlorum_NC_GC4 | GATTCGGACCGACAACAAATTGTCATGCCCAGAAACGCTGTACGAATTGC | [1150] |
| confusum_TN_LR | GATTCAGACTGACAACAAATTGTCAAGCCCAGAAACGCTGTACGAAATGC | [1150] |
| confusum_GA_GC | GATTCAGACCGACAATAAATTGTTAAGCCCAGAAATGCTGTACGAATTGC | [1150] |
| confusum_GA_EC | GATTCASACCGACAAWAAATTGTCAAGCCCAGAAACKCTGTACGAATTRC | [1150] |
| confusum_TX_SJR | GATTCRGACYGACAACAAATTGTCAAGCCCAGAAACGCTGTACGAATTGY | [1150] |
| confusum_TX_SR | GATTCAGACTGACAACAAATTGTCAAGCCCAGAAACGCTGTACGAATTGC | [1150] |
| confusum_TX_Bayou | GATTCGGACCGACAACAAATTGTCAAGCCCAGAAACGCTGTACGAATTGC | [1150] |
| definitum_PA_LC | AATTCAGACCGACAACAAATTGTCAAACCCAGAAACGCTTTACGAATTGT | [1150] |
| definitum_SC_GC | AATTCAGACCGACAACAAATTGTCAAACCCAGAAACGCTGTACGAATTGT | [1150] |
| dixiense_GA_WC | GGTTCAGACCGACAACAAATTGTCAAACCCAGAAACGCTGTACGCATTGC | [1150] |
| dixiense_SC_LBC | GGTTCAGACCGACAACAAATTGTCAAACCCAGAAACGCTGTACGMATTGC | [1150] |
| dixiense_NC_QC | GGTTCAGACCGACAACAAATTGTCAAACCCAGAAACGCTGTACGAATTGC | [1150] |
| dixiense_FL_CC | GGTTCAGACCGACAACAAATTGTCAAACCCAGAAACGCTGTACGCATTGC | [1150] |
| fibrinflatum_PA_DR | AATTCAGGCCGACAACAAATTGTCAAACCCAGAAACGCTGTACGAATTGC | [1150] |
| fibrinflatum_ME_AR | GATTCAGGCCGACAACAAATTGTCACACCCTGAAACGCTGTACGAATTGC | [1150] |
| fibrinflatum_GA_FR | GATTCAGGCCGACAACAAAGTGTCACACCCAGAAACTCTGTACGAATTGC | [1150] |
| haysi_AL_BCC3 | GATTCGGACCGACAACAAATTATCAAGCCCAGAAACGCTGTACGAATTGC | [1150] |
| haysi_TX_SJR | GATTCGGACCGACAACAAATTATCAAGCCCAGAAACGCTGTACGAATTGC | [1150] |
| infenestrum_NC_RR | GATTCAGGYCGACAACAAATTGTCMAACCCAGAAACGCTGTAYGAATTGC | [1150] |

Appendix 1. (Cont.)

| Taxa | Sequence | Base # |
|---|---|---|
| infenestrum_SC_RBC | GATTCAGGTCGACAACAAATTGTCAAACCCAGAAACGCTGTATGAATTGT | [1150] |
| jenningsi_TN_PR | GATTCAGACCGACAACAAAATGTCAAACCCAGAAACGCTGTATGAATTGC | [1150] |
| jenningsi_NC_ER | GATTCAGGTCGACAACAAATTGTCAAACCCAGAAACGCTGTACGAATTGC | [1150] |
| jenningsi_SC_FC | GATTAAGACCGACAACAAATTGTCAAACCCAGAAWCRCTGTACGAATTGC | [1150] |
| jenningsi_PA_BR | GATTCAGGTCGACAACAAATTGTCAAACCCAGAAACGCTGTATGAATTGC | [1150] |
| jenningsi_GA_AR | GATTCAGACCGACAACAAATTGTCAAACCCAGAAACGCTGTATGAATTGT | [1150] |
| jonesi_FL_CC1 | GATTCAGACCGACAACAAATTGTCAAGCCCAGAAACGCTGTACGAATTGT | [1150] |
| jonesi_AL_BCC | GATTCAGACCGACAACAAATTGTCAARCCCAGAAACGCTGTACGAATTGT | [1150] |
| jonesi_NC_CC | GATTCGGACCGACAACAAATTGTCAAGCCCAGAAACGCTGTACGAATTGT | [1150] |
| jonesi_NC_QC | GATTCGGACCGACAACAAATTGTCAAGCCCAGAAACGCTGTACGAATTGT | [1150] |
| jonesi_GA_WC | AATTCAGACCGACAACAAATTGTCAATCCCAGAAACGCTGTACGAATTGT | [1150] |
| krebsorum_NC_MC | AATCCAGACCGACAACAAACTATCAAACCCGGAAACGCTGTACGAATTGC | [1150] |
| krebsorum_SC_CC2 | AATCCAGACCGACAACAAACTATCAAACCCGGAAACGCTGTACGAATTGC | [1150] |
| lakei_PA_NC | GATTCAGACTGATAACAAATTGTCAAGTCCAGAAACGCTGTACGAATTGC | [1150] |
| lakei_SC_BR | GATTCAGACTGACAACAAATTGTCAAGCCCAGAAACGCTGTACGAATTGC | [1150] |
| lakei_FL_CR | RATTCAGACTGACAACAAATTGTCAAGCCCAGAAACGCTGTACGAATTGC | [1150] |
| lakei_Taunt_8_MA_TR | GATTCRGACCGACRAYAAAYTRTCAARCCCAGAAACGCTGTACGAATTGC | [1150] |
| lakei_Taunt_9_MA_TR | GATTCAAACCGACAACAAAYTGTCAAGCCCAGAAACGCTGTACGAATTGT | [1150] |
| luggeri_NWT | AATTCAGACCGACAATAAATTGTCAAACCCAGAAATGCTGTTCGAATTGC | [1150] |
| luggeri_NE_FR | AATTCAGRCCGACAAYAAATTGTCAARCCCAGAAATGCTGTTCGAATTGC | [1150] |
| luggeri_NC_HR | AATTCAGACCGACAATAAATTGTCAAACCCAGAAATGCTGTTCGAATTGC | [1150] |
| luggeri_KY_GR3 | AATTCAGACCGACAACAAATTGTCAAGCCCAGAAATGCTGTTCGAATTGC | [1150] |

| | | |
|---|---|---|
| 'notiale AL BC5+6' | AATTCRGGCCGACAACAAATTGTCAAACCCAGAAACTCTGTACGAATTGC | [1150] |
| notiale_VA_RR | GATTCAGGCCGACAACAAATTGTCAAACCCTGAAACGCTGTACGAATTGC | [1150] |
| notiale_TN_CC | GATTCAGGCCGACAACAAATTGTCAAACCCTGAAACTCTGTACGAATTGC | [1150] |
| notiale_SC_RBC | RATTCRGGCCGACAACAAATTGTCAAACCCAGAAACKCTGTACGAATTGC | [1150] |
| 'notiale AL BC6+6' | GATTCAGGCCGACAACAAATTGTCAAACCCAGAAACTCTGTACGAATTGC | [1150] |
| nyssa_AL_BC | GATTCAGRCCGACAACAAATTGTCAAACCCAGAAACGCTGTATGAATTGC | [1150] |
| nyssa_ME_AR | GATTCAGRCCGACAACAAATTGTCAAACCCAGAAAYGCTGTAYGAATTGC | [1150] |
| nyssa_VA_RR | GATTCAGGCCGACAACAAACTGTCAARCCCAGAAACGCTGTACGAATTGC | [1150] |
| nyssa_ME_PR | GATTCAGRCCGACAACAAATTGTCAAACCCAGAAACGCTGTAYGAATTGC | [1150] |
| nyssa_NC_TR | GATTCAGACCGACAACAAATTGTCAAACCCAGAAACGCTGTAYGAATTGC | [1150] |
| ozarkense_MO_GR2 | GATTCAGACCGACAACAAATTGTCAAGCCCAGAAACGCTGTACGAATTGT | [1150] |
| ozarkense_MO_GR1 | GATTCAGACCGACAACAAATTGTCAAGCCCAGAAACGCTGTACGAATTGT | [1150] |
| penobsco_ME_PR1 | GATTCAGGTCGACAACAAATTGTCAAACCCAGAAACGCTGTACGAATTGC | [1150] |
| penobsco_ME_PR2 | GATTCAGGTCGACAACAAATTGTCAAACCCAGAAACGCTGTATGAATTGT | [1150] |
| podostemi_NC_TR | GATTCAGACCAACAACAAATTTTCAAACCCGGAAACGCTTTACGAATTGC | [1150] |
| podostemi_GA_AS | GATTCAGACCRACAACAAATTTTCAAACCCGGAAACGCTTTACGAATTGC | [1150] |
| podostemi_MS_BC | GATTCAGACCAACAACAAATTTTCAAACCCGGAAACGCTTTACGAATTGC | [1150] |
| podostemi_GA_CR | GATTCAGACCRACAACAAATTTTCAAACCCGGAAACGCTTTACGAATTGC | [1150] |
| remissum_NC_NR2 | GATTCAGGTCGRCAACAAATTGTCAAATCCAGAAACGCTGTATGAATTGT | [1150] |
| remissum_NC_NR1 | GATTCAGGTCGRCAACAAATTGTCAAATCCAGAAACGCTGTATGAATTGT | [1150] |
| remissum_NC_NR3 | GATTCAGRYCRAMAACAAATTGTCRCACCCAGAAAYGCTGTATGAATTGT | [1150] |
| 'snowi AL BC 4+6' | GATTCAGGCCGACAACAAATTGTCAAACCCAGAAACTCTGTACGAATTGC | [1150] |
| snowi_TN_CC | GATTCAGGCCGACAACAAATTGTCAAACCCWGAAACKCTGTACGAATTGC | [1150] |
| 'snowi AL BC 4+4' | GATTCAGGCCGACAACAAATTGTCAAACCCAGAAACGCTGTACGAATTGC | [1150] |
| taxodium_GA_CC2 | GATTCGGACCGACAACAAATTGTCAAGCCCAGAAACGCTGTAYGAATTGC | [1150] |
| taxodium_FL_CR | GATTCGGACCGACAAYRAATTGTCAAGCCCAGAAACGCTGTACGAATTGC | [1150] |
| underhilli_AL_HC3 | AATTCGGGCCGACAACAAATTGTCAAACCCAGAAACTCTGTACGAATTGC | [1150] |
| underhilli_GA_FR | AATTCGGGCCGACAACAAATTGTCAAACCCAGAAGCTCTGTACGAATTGC | [1150] |
| underhilli_GA_FS | RATTCAGGCCGACAACAAATTGWCAAACCCAGAAACTCTGTACGAATTGC | [1150] |

| | | |
|---|---|---|
| tuberosum | CTGATGTTTGTGACAAGTTCGAAATCGCTAAAAACAATGTACACCCGGCT | [1200] |
| verecundum | CAGATATTTGTGACAAGATTGAAATCGCTCAAAATAACGGACATATGGCT | [1037] |
| decimatum | CTGATATTTGTGATAAAATTAATATCGCACGAAACAACGGACAACCGGCT | [1200] |
| apricarium | CTGATATTTGTGATAAGTTGGAAATCGCACGAAAAAACGGACAACCGGCT | [1200] |
| reptans | CCGATATTTGTGACAAGATTGAAATCRCACGAMACAACGGGCAACCGGCT | [1200] |
| anchist_AL_HC | CTGATATTTGTGACAAGATTGAAATCGTACAAAACAACGGAAAAGTGGCT | [1200] |
| anchist_DE_DR | CTGATATTTGTGACAAGATWGAAATCGTACAAARCAACGGAAAAGTGGCT | [1200] |
| anchist_ME_AR | CTGATATTTGTGACAAGATTGAAATCGTACAAAGCAACGGAAAAGTGGCT | [1200] |

Appendix 1. (Cont.)

| Taxa | Sequence | Base # |
|---|---|---|
| anchist_NC_NR | CTGATATTTGTGACAAGATTGAAATCGTACAAARCAACGGAAAAGTGGCT | [1200] |
| anchist_ME_KR | CTGATATTTGTGACAAGATTGAAATCGTACAAAGCAACGGAAAAGTGGCT | [1200] |
| aranti_GA_FS | CTGATATTTGTGACAAGATAGAAATCGTACAATACAACAGTAAAGTGGCT | [1200] |
| aranti_GA_AS | CTGATATTTGTGACAAGATAGAAATCGTACAATACAACAGTAAAGTGGCT | [1200] |
| aranti_AL_HC | CTGATATTTGTGACAAGATAGAAATCGTACAATACAACAGTAAAGTGGCT | [1200] |
| aranti_SC_LR | CTGATATTTGTGACAAGATAGAAATCGTACAATACAACAGTAAAGTGGCT | [1200] |
| chlorum_NC_GC3 | TTGATATTTGTGACAAGATTGAAATCGTACAAAACAACAGTAAAGTGGCT | [1200] |
| chlorum_NC_GC1 | CTGATATTTGTGACAAAATTGAAATCGTACAAAACAACAGTAAAGTGACT | [1200] |
| chlorum_NC_GC4 | CTGATATTTGTGACAAAATTGAAATCGTACAAAACAAYAGTAATGTGGCT | [1200] |
| confusum_TN_LR | CTGATATTTGTGACAAGATTGAAATCGTACAAAACAAYRAAAAAGTGGCT | [1200] |
| confusum_GA_GC | CTGATATTTGTGATAAGATTGAAATCGTACAAAACAATAGTAAAGTGGCT | [1200] |
| confusum_GA_EC | CTGATATTTGTGACAAAATTGAAATCGTACAAAACAAYAGTMAAGTGGCY | [1200] |
| confusum_TX_SJR | CTGATRTTTGTGAYAAGATTGAAATCGTACAAAACAATAGTAAAGTGRCT | [1200] |
| confusum_TX_SR | CTGATATTTGTGACAAAATTGAAATCGTACAAAACAACAGTAAAGTGGCT | [1200] |
| confusum_TX_Bayou | CTGATATTTGTGATAAGATTGAAGTCGTACAAAACAACGGAAAAGTGACT | [1200] |
| definitum_PA_LC | CTGATGTTTGTGACAAGATTGAAATCGTACAAAACAATAGTAAAGTGGCT | [1200] |
| definitum_SC_GC | CTGATRTTTGTGACAAGATTGAAATCGTACAAAACAATAGTAAAGTGGCT | [1200] |
| dixiense_GA_WC | CTGATATTTGTGACAAGATTGAAATCGTACAAAACAAAGGAAAAGTGGCT | [1200] |
| dixiense_SC_LBC | CTGATATTTGTGACAAGATTGAAATCGTACAAAACAAAGGAAAAGTGGCT | [1200] |
| dixiense_NC_QC | CTGATATTTGTGACAAGATTGAAATCGTACAAAACAAAGGAAAAGTGGCT | [1200] |
| dixiense_FL_CC | CTGATATTTGTGACAAGATTGAAATCGTACAAAACAAAGGAAAAGTGGCT | [1200] |
| fibrinflatum_PA_DR | CTGATATTTGTGACAAGATTGAAATCGCACAAAACAGCTGTAAAATGGCT | [1200] |
| fibrinflatum_ME_AR | CTGATATTTGTGACAAGATTGAAATCGCACAAAACAGCTGTAAAGTGGCT | [1200] |
| fibrinflatum_GA_FR | CTGATATTTGTGACAAGATTGAAATCGCACAAAACAGCTGTAAAGTGGCT | [1200] |
| haysi_AL_BCC3 | TTGATATTTGTGACAAGATTGAAATCGTACAAAACAAGGGAAAAGTGGCT | [1200] |

| | | |
|---|---|---|
| haysi_TX_SJR | TTGATATTTGTGACAAGATTGAAATCGTACAAAACAAGGGAAAAGTGGCT | [1200] |
| infenestrum_NC_RR | CTGATATTTGTGACAAGATTGAAATCGYACAAAACAACRGWAAAGTGGCT | [1200] |
| infenestrum_SC_RBC | CTGATATTTGTGACAAGATTGAAATCGCACAAAACAACAGTAAAGTGGCT | [1200] |
| jenningsi_TN_PR | CTGATATTTGTGACAAGATTGAAATCGCACAAAACAACGGAAAAGTGGCT | [1200] |
| jenningsi_NC_ER | CTGATATTTGTGACAAGATTGAAATCGCACAAAACAACAGAAAAGTGGCT | [1200] |
| jenningsi_SC_FC | CWGATATTTGTGACAAGATTGAAATCGCACAAAACAACGGAAAAGTGGYT | [1200] |
| jenningsi_PA_BR | CTGATATTTGTGACAAGATTGAAATCGCACAAAACAACAGTAAAGTGGCT | [1200] |
| jenningsi_GA_AR | CTGATATTTGTGACAAGATTGAAATCGCACAAAACAACAGTAAAGTGTCT | [1200] |
| jonesi_FL_CC1 | CTGATGTTTGTGACAAGATTGAAATCGTACAGAACAATAGTAAAGTGGCT | [1200] |
| jonesi_AL_BCC | CTGATGTTTGTGACAAGATTGAAATCGTACAAAACAATAATAARGTGGCT | [1200] |
| jonesi_NC_CC | CTGATGTTTGTGACAAGATTGAAATCGTACAAAACAATAATAAAGTGGCT | [1200] |
| jonesi_NC_QC | CTGATRTTTGTGACAAGATTGAAATCGTACAAAACAATARTAAAGTGGCT | [1200] |
| jonesi_GA_WC | CAGATGTTTGTGACAAGATTGAAATCGTACAAAACAACGAAAAAGTGATT | [1200] |
| krebsorum_NC_MC | CTGATGTTTGTGACAAGATAGAAATCGTACAAAACAATAGTAAAGTGGCT | [1200] |
| krebsorum_SC_CC2 | CTGATGTTTGTGACAAGATAGAAATCGTACAAAACAATAGTAAAGTGGCT | [1200] |
| lakei_PA_NC | CTGATATTTGTGACAAGATTGAAATCGTACAAAACAATAGTAAAGTGGCT | [1200] |
| lakei_SC_BR | CTGATATTTGTGACAAGATTGAAATCGTACAAAACAAYRAAAAAGTGGCT | [1200] |
| lakei_FL_CR | CTGATATTTGTGACAAGATTGAAATCGTACAAAACAAYAGWAAAGTGACT | [1200] |
| lakei_Taunt_8_MA_TR | CYGATATTTGTGAYAAGATTGAARTCGTACAAAACAACGRAAAAGTGRCT | [1200] |
| lakei_Taunt_9_MA_TR | CTGATATTTGTGACAAGATTGAAATCGTACAAAACAACGAAAAAGTGGCT | [1200] |
| luggeri_NWT | CTGATATTTGTGACAAGATCGAAATCGTGCAAAACAARGGAAAAGTGGCT | [1200] |
| luggeri_NE_FR | CTGATATTTGTGACAAGATCGAAATCGTGCAAAACAAGGGAAAAGTGGCT | [1200] |
| luggeri_NC_HR | CTGATATTTGTGACAAGATCGAAATCGTGCAAAACAAAGGAAAAGTGGCT | [1200] |
| luggeri_KY_GR3 | CTGATATTTGTGACAAGATCGAAATCGTGCAAAACAAAGGAAAAGTGGCT | [1200] |
| 'notiale AL BC5+6' | CTGATATTTGTGACAAGATTGAAATCGCACAAAACAGCTGTAAAGTGGCT | [1200] |
| notiale_VA_RR | CTGATATTTGTGACAAGATTGAAATCGCACAAAACAGCTGTAAAGTGGCT | [1200] |
| notiale_TN_CC | CTGATATTTGTGACAAGATTGAAATCGCACAAAACAGCTGTAAAGTGGCT | [1200] |
| notiale_SC_RBC | CTGATATTTGTGACAAGATTGAAATCGCACAAAACAACTSTAAAGTGGCT | [1200] |
| 'notiale AL BC6+6' | CTGATATTTGTGACAAGATTGAAATCGCACAAAACAGCTGTAAAGTGGCT | [1200] |
| nyssa_AL_BC | CTGATATTTGTGACAAGATTGAAATCGTACAAAACAACGGARAAGTGGCT | [1200] |
| nyssa_ME_AR | CTGATATTTGTGACAAGATTGAAATCGTACAAAACAACGGARAAGTGGCT | [1200] |
| nyssa_VA_RR | CTGATATTTGTGACAAGATTGAAATCGTACAAAACAACGGAGAAGAGGCT | [1200] |
| nyssa_ME_PR | CTGATATTTGTGACAAGATTGAAATCGTACAAAACAACGGARAAGTGGCT | [1200] |
| nyssa_NC_TR | CTGATATTTGTGACAAGATTGAAATCGTACAAAACAACGGARAAGTGGCT | [1200] |
| ozarkense_MO_GR2 | CTGATATTTGTGACAAGATTGAAATCGTACAAAACAAGGGAAAAGCRGCT | [1200] |
| ozarkense_MO_GR1 | CTGATATTTGTGACAAGATTGAAATCGTACAAAACAAGGGAAAAGCGGCT | [1200] |
| penobsco_ME_PR1 | CTGATATTTGTGACAAGATTGAAATCGCACAAAACAACAGTAAAGTRGCT | [1200] |

Appendix 1. (Cont.)

| Taxa | Sequence | Base # |
|---|---|---|
| penobsco_ME_PR2 | CTGATATTTGTGACAAGATTGAAATCGCACAAAACAACAGTAAAGTGGCT | [1200] |
| podostemi_NC_TR | CTGATATTTGTGACAAGATTGAAATCGCACAAAACAACGGAAAAGTGRCT | [1200] |
| podostemi_GA_AS | CTGATATTTGTGACAAGATTGAAATCGCACAAAACAACGGAAAAGTGGCT | [1200] |
| podostemi_MS_BC | CTGATATTTGTGACAAGATTGAAATCGCACAAAACAACGGAAAAGTGGCT | [1200] |
| podostemi_GA_CR | CTGATATTTGTGACAAGATTGAAATCGCACAAAACAACGGAAAAGTGRCT | [1200] |
| remissum_NC_NR2 | CCGATATTTGTGACAAGATTGAAATCGCACAAAACAACGGAAAAGTATCT | [1200] |
| remissum_NC_NR1 | CTGATATTTGTGACAAGATTGAAATCGCACAAAACAACGGAAAAGTRGCT | [1200] |
| remissum_NC_NR3 | CTGATATTTGTGACAAGATTGAAATCGCACAAAACAACGGAAAAGTGGCT | [1200] |
| 'snowi AL BC 4+6' | CTGATATTTGTGACAAGATTGAAATCGCACAAAACAGCTGTAAAGTGGCT | [1200] |
| snowi_TN_CC | CTGATATTTGTGACAAGATTGAAATCGCACAAAACAGCTGTAAAGTGGCT | [1200] |
| 'snowi AL BC 4+4' | CTGATRTTTGTGACAAGWTTGAAATCGCACAAAACAGCTGTAAAGTGGCT | [1200] |
| taxodium_GA_CC2 | CTGATATTTGTGACAAGATTGAAATCGTACAAAACAAYAGTAAAGTGGCT | [1200] |
| taxodium_FL_CR | CTGATATTTGTGACAAGATTGAAATCGTACAAAACAATARTAAAGTGGCT | [1200] |
| underhilli_AL_HC3 | CTGATATTTGTGACAAGATTGAAATCGCACAAAACAGCTGTAAAGTGGCT | [1200] |
| underhilli_GA_FR | CTGATATTTGTGACAAGATTGAAATCGCACAAAACAGCTGTAAAGTGGCT | [1200] |
| underhilli_GA_FS | CTGATATTTGTGACAAGATTGAAATCGCACAAAACAGCTGTAAAGTGGCT | [1200] |

| | | |
|---|---|---|
| tuberosum | CAGGTCTATGCCCTCAAATATCGTCACAATTTGTACTGTAACCAAAAGAA | [1250] |
| verecundum | CAGGTCTATGCGTTCAAACATCGTAACAATTTGTACTGCAACCAAAAGAA | [1087] |
| decimatum | CAAGTTTATGCGCTGAAA-------------------------------- | [1218] |
| apricarium | CAGGTTTACGCACTGAAATACCGTCAAAATTTGTACTGCAACCAAAAGAA | [1250] |
| reptans | CAAGTTTACRCGCTGAAATATCGTCACAATTTGTACTGTAACCAAAAGAA | [1250] |
| anchist_AL_HC | CAGGTCTATGCTCTGAAATATCGTGGCAATTTGTATTGTAACCAAAAGAA | [1250] |
| anchist_DE_DR | CAGGTCTATGCTCTGAAATATCGTGGCAATTTGTATTGTAACCAAAAGAA | [1250] |
| anchist_ME_AR | CAGGTCTATGCTCTGAAATATCGTGGCAATTTGTATTGTAACCAAAAGAA | [1250] |
| anchist_NC_NR | CAGGTCTATGCTCTGAAATRTCGTGGCAATTTGTRTTGTAACCMAAAGAA | [1250] |

| | | |
|---|---|---|
| anchist_ME_KR | CAGGTCTATGCTCTGAAATATCGTGGCAATTTGTATTGTAACCAAAAGAA | [1250] |
| aranti_GA_FS | CAGGTCTATGCACTGAAATATCGTGGCAATTTGTATTGCAACGAAAAGAA | [1250] |
| aranti_GA_AS | CAGGTCTATGCACTGAAATATCGTGGCAATTTGTATTGCAACGAAAAGAA | [1250] |
| aranti_AL_HC | CAGGTCTATGCACTGAAATATCGTGGCAATTTGTATTGTAACGAAAAGAA | [1250] |
| aranti_SC_LR | CAGGTCTATGCACTGAAATATCGTGCCAATTTGTATTGTAACGAAAAGAA | [1250] |
| chlorum_NC_GC3 | CARGTCTACGCACTGAAATATCGTGGCAATTTATATTGTAACCAAAAGAA | [1250] |
| chlorum_NC_GC1 | CAAGTGTATGCACTGAAATATCGTGGCAATTTGTATTGTAACCAAAAGAA | [1250] |
| chlorum_NC_GC4 | CAGGTCTATGCACTGAAATATCGTRGCAATTTGTATTGTAACCAAAAGAA | [1250] |
| confusum_TN_LR | CAGGTCTATGCACTGAAATATCGTAGCAATTTGTATTGTAACCAAAAGAA | [1250] |
| confusum_GA_GC | CAGGTCTATGCGCTGAAATATCGTGGCAATTTGTATTGTAACCAAAAGAA | [1250] |
| confusum_GA_EC | CAGGTCTATGCACTGAAATATCGTGGCAATTTGTRTTGTAACCAAAAGAA | [1250] |
| confusum_TX_SJR | CAGGTCTATGCACTGAAATATCGTGGYAATTTGTATTGTAACCAAAAGAA | [1250] |
| confusum_TX_SR | CAGGTCTATGCACTGAAATATCGTGGCAATTTGTATTGTAACCAAAAGAA | [1250] |
| confusum_TX_Bayou | CAGGTGTATGCACTGAAATATCGTGGTAATTTGTATTGTAACCAAAAGAA | [1250] |
| definitum_PA_LC | CAGGTCTATGCACTGAAATATCGTGGCAATTTGTATTGTAACCAAAAGAA | [1250] |
| definitum_SC_GC | CAGGTCTATGCACTGAAATATCGTGGCAATTTGTATTGTAACCAAAAGAA | [1250] |
| dixiense_GA_WC | CAGGTCTATGCACTGAAATATCGTGGCAATTTGTATTGTAATCAAAAGAA | [1250] |
| dixiense_SC_LBC | CAGGTCTATGCACTGAAATATCGTGGAAATTTGTATTGTAATCAAAAGAA | [1250] |
| dixiense_NC_QC | CAGGTCTATGCACTGAAATATCGTGGAAATTTGTATTGTAATCAAAAGAA | [1250] |
| dixiense_FL_CC | CAGGTCTATGCACTGAAATATCGTGGCAATTTGTATTGTAATCAAAAGAA | [1250] |
| fibrinflatum_PA_DR | CAGGTGTATGCAYTGAAATAYCGTGGCAATTTGTATTGTAACCAAAAGAA | [1250] |
| fibrinflatum_ME_AR | CAGGTGTATGCATTGAAATATCGTGGCAATTTGTATTGCAACCAAAAGAA | [1250] |
| fibrinflatum_GA_FR | CAGGTGTATGCATTGAAATATCGTGGCAATTTGTATTGCAACCAAAAGAA | [1250] |
| haysi_AL_BCC3 | CARGTCTATGCACTGAAATATCGTGGCAACTTGTATTGTAACCAAAAGAA | [1250] |
| haysi_TX_SJR | CAGGTCTATGCACTGAAATATCGTGGCAACTTGTATTGTAACCAAAAGAA | [1250] |
| infenestrum_NC_RR | CAGGTCTATGCTCTGAAATATCGTGGCAATTTGTATTGCAACCAAAAGAA | [1250] |
| infenestrum_SC_RBC | CAGGTSTATGCTCTGAAATATCGTGGCAATTTGTATTGYAACCAAAAGAA | [1250] |
| jenningsi_TN_PR | CAGGTCTATGCTCTGAAATATCGTGGCAATTTGTATTGTAACCAAAAGAA | [1250] |
| jenningsi_NC_ER | CAGGTGTATGCTCTGAAATATCGTGGCAATTTGTATTGTAACCAACAGAA | [1250] |
| jenningsi_SC_FC | CAGGTCTATGCTCTGAAATATCGTGGCAATTTGTATTGTAACCAAAAGAA | [1250] |
| jenningsi_PA_BR | CAGGTGTATGCATTGAAATATCGTGGCAATTTGTATTGTAACCAAAAGAA | [1250] |
| jenningsi_GA_AR | CAGGTGTATGCATTGAAATATCGTGGCAATTTGTATTGTAACCAAAAGAA | [1250] |
| jonesi_FL_CC1 | CATGTCTATGCACTGAAATATCGCGGCCATTTGTATTGTAACCAAAAGAA | [1250] |
| jonesi_AL_BCC | CATGTCTATGCACTGAAATATCGTGGCAATTTGTATTGTAACCAAAAGAA | [1250] |

Appendix 1. (Cont.)

| Taxa | Sequence | Base # |
|---|---|---|
| jonesi_NC_CC | CATGTCTATGCACTGAAATATCGCGGCCATTTGTATTGTAACCAAAAGAA | [1250] |
| jonesi_NC_QC | CATGTCTATGCACTGAAATATCGYGGCCATTTGTATTGTAACCAAAAGAA | [1250] |
| jonesi_GA_WC | CAAGTCTATGCACTGAAATATCGTGGCAATTTGTATTGTAACCAAAAGAA | [1250] |
| krebsorum_NC_MC | CAGGTCTATGCTCTGAAATATCGTGGCAATTTGTATTGTAACCAAAAGAA | [1250] |
| krebsorum_SC_CC2 | CAGGTCTATGCTCTGAAATATCGTGGCAATTTGTATTGTAACCAAAAGAA | [1250] |
| lakei_PA_NC | CAGGTCTATGCACTGAAATATCGTGGYAATTTGTATTGTAACCAAAAGAA | [1250] |
| lakei_SC_BR | CAGGTSTATGCACTGAAATATCGTGGCAATTTGTATTGTAACCAAAAGAA | [1250] |
| lakei_FL_CR | CAGGTSTATGCACTGAAATATCGTGGYAATTTGTATTGTAACCAAAAGAA | [1250] |
| lakei_Taunt_8_MA_TR | CARGTCTATGCWCTGAAATATCGTGGCAATTTGTATTGTAACCAAAAGAA | [1250] |
| lakei_Taunt_9_MA_TR | CAGGTGTATGCACTGAAATATCGTGGCAATTTGTATTGTAACCAAAAGAA | [1250] |
| luggeri_NWT | CAGGTCTATGCACTGAAATATCGTGGCAATTTGTATTGCAACCAAAAGAA | [1250] |
| luggeri_NE_FR | CAGGTCTATGCACTGAAATATCGTGGCAATTTGTATTGCAACCAAAAGAA | [1250] |
| luggeri_NC_HR | CAGGTCTATGCACTGAAATATCGTGGCAATTTGTATTGCAACCAAAAGAA | [1250] |
| luggeri_KY_GR3 | CAGGTCTATGCACTGAAATATCGTTACAATTTGTATTGCAACCAAAAGAA | [1250] |
| 'notiale AL BC5+6' | CAGGTGTATGCATTGAAATATCGTGGCAATTTGTATTGYAACCAAAAGAA | [1250] |
| notiale_VA_RR | CAGGTGTATGCATTGAAATATCGTGGCAATTTGTATTGCAACCAAAAGAA | [1250] |
| notiale_TN_CC | CAGGTGTATGCATTGAAATATCGTGGCAATTTGTATTGYAACCAAAAGAA | [1250] |
| notiale_SC_RBC | CAGGTGTATGCATTGAAATATCGTGGCAATTTGTATTGTAACCAAAAGAA | [1250] |
| 'notiale AL BC6+6' | CAGGTGTATGCATTGAAATATCGTGGCAATTTGTATTGTAACCAAAAGAA | [1250] |
| nyssa_AL_BC | CAGGTCTATGSTCTGAAATATCGTGGCAATTTGTATTGTAACCAAAAGAA | [1250] |
| nyssa_ME_AR | CAGGTCTATGCTCTGAAATATCGTGGCAATTTGTATTGTAACCAAAAGAA | [1250] |
| nyssa_VA_RR | CAGGTCTATGCTCTGAAATATCGTGGCAATTTGTATTGTAACCAAAAGAA | [1250] |
| nyssa_ME_PR | CAGGTCTATGCTCTGAAATATCGTGGCAATTTGTATTGTAACCAAAAGAA | [1250] |
| nyssa_NC_TR | CAGGTCTATGCTCTGAAATATCGTGGCAATTTGTATTGTAACCAAAAGAA | [1250] |
| ozarkense_MO_GR2 | CAGGTCTATGCACTGAAATATCGTGGCAATTTGTATTGCAACCAAAAGAA | [1250] |
| ozarkense_MO_GR1 | CAGGTCTATGCACTGAAATATCGTGGCAATTTGTATTGCAACCAAAAGAA | [1250] |
| penobsco_ME_PR1 | CAGGTCTATGCTCTGAAATATCGTGGCAATTTGTATTGTAACCAAAAGAA | [1250] |
| penobsco_ME_PR2 | CAKGTGTATGCATTGAAATATCGTGGCAATTTGTATTGCAACCAAAAGAA | [1250] |
| podostemi_NC_TR | CAGGTCTATGCTCTGAAATATCGTGRCAATTTATATTGTAACCAAAAGAA | [1250] |
| podostemi_GA_AS | CAGGTCTATGCTCTGAAATATCGTGGCAATTTATATTGTAACCAAAAGAA | [1250] |
| podostemi_MS_BC | CAGGTCTATGCTCTGAAATATCGTGGMAATTTATATTGTAACCAAAAGAA | [1250] |

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podostemi_GA_CR         CAGGTCTATGCTCTGAAATATCGTGGCAATTTATATTGTAACCAAAAGAA   [1250]
remissum_NC_NR2         CAGGTCTATGCTCTGAAATATCGTGGCAATTTGTATTGTAACCAAAAGAA   [1250]
remissum_NC_NR1         CARGTCTATGCTCTGAAATATCGTGGCAATTTGTATTGTAACCAAAAGAA   [1250]
remissum_NC_NR3         CAGGTYTATGCTCTGAAATATCGTGGCAATTTGTATTGTAACCAAAAGAA   [1250]
'snowi AL BC 4+6'       CARGTGTATGCATTGAAATAGCGTGGCACTTTGTATTGTAACCAAAAGAA   [1250]
snowi_TN_CC             CAGGTGTATGCATTGAAATATCGTGGCAATTTGTATTGTAACCAAAAGAA   [1250]
'snowi AL BC 4+4'       CAGGTGTATGCATTGAAATATCGTGGCAATTTGTATTGCAACCAAAAGAA   [1250]
taxodium_GA_CC2         CAGRTCTATGCACTGAAATATCGTGGYAATTTGTATTGTAACCAAAAGAA   [1250]
taxodium_FL_CR          CAGGTCTATGCACTGAAATATCGTGGCAATTTGTATTGTAACCAAAAGAA   [1250]
underhilli_AL_HC3       CAGGTGTATGCATTGAAATATCGTGGCAATTTGTATTGTAACCAAAAGAA   [1250]
underhilli_GA_FR        CAGGTGTATGCATTGAAATATCGTGGCAATTTGTATTGTAACCAAAAGAA   [1250]
underhilli_GA_FS        CAGGTGTATGCATTGAAATATCGTGGCAATTTGTATTGCAACCAAAAGAA   [1250]


tuberosum               AGTGGCCTCGGATGTGACTTCCTTCCATTTGACGGATAAATACGTGGCTT   [1300]
verecundum              AGTGGCATCGGATGTGACTTCCTTCCATTTGGCGGATAGATACGTGGCTT   [1137]
decimatum               --------------------------------------------------   [1218]
apricarium              AGTGGCCTCGGATGTGACCTCTTTCCATTTGACGGATAGATACGTGGCTT   [1300]
reptans                 AGTGGCCTCGGATGTGACCTCTTTCCATTTGACGGATAGATATGTGGCCT   [1300]
anchist_AL_HC           AATAGCCTCGGATGTGACCTCTTTCCATCTGACGGATAAATATGTGGCCT   [1300]
anchist_DE_DR           AATAGCCTCGGATGTGACCTCTTTCCATTTRACGGATAAATATGTGGCCT   [1300]
anchist_ME_AR           AATAGCCTCGGATGTGACCTCTTTCCATTTGACGGATAAATATGTGGCCT   [1300]
anchist_NC_NR           AATAGCCTCGGATGTGACCTCTTTCCATTTGACGGATAAATATGTGGCCT   [1300]
anchist_ME_KR           AATAGCCTCGGATGTGACCTCTTTCCATTTGACGGATAAATATGTGGCCT   [1300]
aranti_GA_FS            AATGGCATCGGATGTGACCTCTTTYCATTTGACGGATAGATATGTGGCAT   [1300]
aranti_GA_AS            AATGGCATCGGATGTGACCTCTTTYCATTTGACGGATAGATATGTGGCAT   [1300]
aranti_AL_HC            AATGGCATCGGATGTGACCTCTTTTCATTTGACGGATAGATATGTGGCAT   [1300]
aranti_SC_LR            AATGGCCTCGGATGTGACCTCTTTTCATTTGACGGATAGATATGTGGCAT   [1300]
chlorum_NC_GC3          AATAGCCTCGGATGTGACTTCTTTCCATTTGACGGATAAATATGTGGCGT   [1300]
chlorum_NC_GC1          AATAGCCTCGGATGTGACATCTTTCCATTTGACGGATAAATATGTGGCGT   [1300]
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Appendix 1. (Cont.)

| Taxa | Sequence | Base # |
|---|---|---|
| chlorum_NC_GC4 | AATAGCCTCGGATGTGACWTCTTTCCATTTGACGGATAAATATGTGGCRT | [1300] |
| confusum_TN_LR | AATAGCTTCGGATGTGACTTCTTTCCATTTGACGGATAAATATGTGGCGT | [1300] |
| confusum_GA_GC | AATAGCCTCGGATGTGACTTCTTTCCATTTGACGGATAAATATGTGGCGT | [1300] |
| confusum_GA_EC | AATAGCCTCGGATGTGACTTCTTTCCATTTGACGGATAAATATGTGGCRT | [1300] |
| confusum_TX_SJR | AATAGCCTCGGATGTGACTTCTTTCCATTTGACGGATAAATATGTGGCGT | [1300] |
| confusum_TX_SR | AATAGCCTCGGATGTGACTTCTTTCCATTTGACGGATAAATATGTGGCGT | [1300] |
| confusum_TX_Bayou | AATAGCCTCGGATGTGACTTCTTTCCATTTGACGGATAAATATGTGGCGT | [1300] |
| definitum_PA_LC | AATAGCCTCGGATGTTACTTCTTTCCATTTGACGGATAAATATGTGGCGT | [1300] |
| definitum_SC_GC | AATAGCCTCGGATGTTACTTCTTTCCATTTGACGGATAAATATGTGGCGT | [1300] |
| dixiense_GA_WC | AATGGCCTCAGATGTGACCTCTTTTCATTTGACGGATCAATATGTGGCAT | [1300] |
| dixiense_SC_LBC | AATGGCCTCAGATGTGACCTCTTTTCATTTGACGGATCAATATGTGGCAT | [1300] |
| dixiense_NC_QC | AATGGCCTCAGATGTGACCTCTTTTCATTTGACGGATCAATATGTGGCAT | [1300] |
| dixiense_FL_CC | AATGGCCTCAGATGTGACCTCTTTTCATTTGACGGATCAATATGTGGCAT | [1300] |
| fibrinflatum_PA_DR | AATGGCTTCGGATGTGACCTCTTTCCACTTGACAGATAAATATGTAGCAT | [1300] |
| fibrinflatum_ME_AR | GATGGCCTCGGATGTGACCTCTTTCCATTTGACGGATAAATATGTGGCAT | [1300] |
| fibrinflatum_GA_FR | GATGGCYTCGGATGTGACCTCTTTCCATTTGACRGATAAATATGTAGCAT | [1300] |
| haysi_AL_BCC3 | AATGGCCTCGGATGTGACCTCTTTCCATTTGACGGATCAATATGTGGCAT | [1300] |
| haysi_TX_SJR | AATGGCCTCGGATGTGACCTCTTTCCATTTGACGGATCAATATGTGGCAT | [1300] |
| infenestrum_NC_RR | AATGGCCTCGGATGTGACCTCTTTCCATTTGACGGATAAATATGTGGCCT | [1300] |
| infenestrum_SC_RBC | AATGGCCTCGGATGTGACCTCTTTCCATTTGACGGATAAATATGTGGCCT | [1300] |
| jenningsi_TN_PR | AATGGCCTCGGATGTGACCTCTTTCCATTTGACGGATAAATATGTCGCGT | [1300] |
| jenningsi_NC_ER | AATGGCCTCGGATGTGACCTCTTTTCATTTGACGGATAAATATGTGGCAT | [1300] |
| jenningsi_SC_FC | AATGGCCTCGGATGTGACYTCTTTTCATTTGACGGATAAATATGTSGCRT | [1300] |
| jenningsi_PA_BR | AATGGCCTCGGATGTGACCTCTTTCCATTTGACGGATAAATATGTCGCGT | [1300] |
| jenningsi_GA_AR | AATGGCCTCGGATGTGACCTCTTTCCATTTGACGGATAAATATGTCGCAT | [1300] |
| jonesi_FL_CC1 | AATAGCCTCGGATGTGACTTCTTTCCATTTGACGGATAAATATGTGGCGT | [1300] |
| jonesi_AL_BCC | AATAGCCTCGGATGTGACTTCTTTCCATTTGACGGATAAATATGTGGCRT | [1300] |
| jonesi_NC_CC | AATAGCCTCGGATGTGACTTCTTTCCATTTGACGGATAAATATGTGGCGT | [1300] |
| jonesi_NC_QC | AATAGCCTCGGATGTGACTTCTTTCCATTTGACGGATAAATATGTGGCGT | [1300] |
| jonesi_GA_WC | AATAGCCTCGGATGTGACTTCTTTCCATTTGACGGATAAATATGTGGCGT | [1300] |
| krebsorum_NC_MC | AATAGCCTCGGATGTGACCTCTTTTCATTTGACGGATAAATATGTGGCCT | [1300] |
| krebsorum_SC_CC2 | AATAGCCTCGGATGTGACCTCTTTTCATTTGACGGATAAATATGTGGCCT | [1300] |
| lakei_PA_NC | AATAGCCTCGGATGTGACATCTTTCCATTTGACGGATAAATATGTGGCGT | [1300] |
| lakei_SC_BR | AATAGCTTCGGATGTGACMTCTTTTCATCTGACAGATAAATATGTGGCGT | [1300] |

| | | |
|---|---|---|
| lakei_FL_CR | AATAGCCTCGGATGTGACTTCTTTCCATTTGACGGACAAATATGTGGCGT | [1300] |
| lakei_Taunt_8_MA_TR | AATRGCCTCGGATGTGACTTCTTTCCATTTGACGGATAAATATGTRGCRT | [1300] |
| lakei_Taunt_9_MA_TR | AATAGCCTCGGATGTGACATCTTTCCATTTGACGGATAAATATGTAGCRT | [1300] |
| luggeri_NWT | AATGGCCTCGGATGTGACCTCTTTCCATTTGACGGATCAATATGTGGCAT | [1300] |
| luggeri_NE_FR | AATGGCTTCGGATGTGACCTCTTTCCATTTGACGGATCAATATGTGGCAT | [1300] |
| luggeri_NC_HR | AATGGCCTCGGATGTGACCTCTTTYCATTTGACGGATCAATATGTGGCAT | [1300] |
| luggeri_KY_GR3 | AATGGCCTCGGATGTGACTTCTTTCCATTGGACGGATCAATATGTGGCAT | [1300] |
| 'notiale AL BC5+6' | RATGGCCTCGGATGTGACCTCTTTCCAYTTGACGGATAAATATGTRGCAT | [1300] |
| notiale_VA_RR | GATGGCCTCGGATGTGACCTCTTTCCATTTGACGGATAAATATGTGGCAT | [1300] |
| notiale_TN_CC | GATGGCCTCRGATGTGACCTCTTTCCAYTTGACGGATAAATATGTGGCAT | [1300] |
| notiale_SC_RBC | GATGGCTTCGGATGTGACCTCTTTCCAYTTGACGGATAAATATGTGGCAT | [1300] |
| 'notiale AL BC6+6' | GATGGCCTCAGATGTGACCTCTTTCCACTTGACGGATAAATATGTGGCAT | [1300] |
| nyssa_AL_BC | AATAGCCTCGGATGTGACCTCTTTCCATTTGACGGATAAATATGTGGCCT | [1300] |
| nyssa_ME_AR | AATAGCCTCGGATGTGACCTCTTTCCATTTGACGGATAAATATGTGGCCT | [1300] |
| nyssa_VA_RR | AATAGCCTCGGATGTGACCTCTTTCCATTTGACGGATAAATATGTGGCCT | [1300] |
| nyssa_ME_PR | AATAGCCTCGGATGTGACCTCTTTCCATTTGACGGATAAATATGTGGCCT | [1300] |
| nyssa_NC_TR | AATAGCCTCGGATGTGACCTCTTTCCATTTGACGGATAAATATGTGGCCT | [1300] |
| ozarkense_MO_GR2 | AATAGCCTAGGATGTGACCTCTTTCCATTTGACGGATCTATATGTGGCAT | [1300] |
| ozarkense_MO_GR1 | AATGGCCTCGGATGTGACCTCTTTCCATTTGACGGATCTRTATGTGGCAT | [1300] |
| penobsco_ME_PR1 | AATGGCCTCGGATGTGACCTCTTTCCATTTGACGGATAAATATGTGGCAT | [1300] |
| penobsco_ME_PR2 | AATGGCCTCGGATGTGACCTCTTTCCATTTGACGGATAAATATGTGGCAT | [1300] |
| podostemi_NC_TR | AATGGCCTCGGATGTGACCTCTTTCCATTTGACGGATAAATATGTGGCAT | [1300] |
| podostemi_GA_AS | AATGGCCTCGGATGTGACCTCTTTCCATTTGACGGATAAATATGTGGCAT | [1300] |
| podostemi_MS_BC | AATGGCCTCGGATGTGACCTCTTTCCATTTGACGGATAAATATGTGGCAT | [1300] |
| podostemi_GA_CR | AATRGCCTCGGATGTGACCTCTTTCCATTTGACGGATAAATATGTGGCAT | [1300] |
| remissum_NC_NR2 | AATAGCCTCGGATGTGACCTCTTTCCATTTGACGGATAAATATGTGGCAT | [1300] |
| remissum_NC_NR1 | AATRGCCTCGGATGTGACCTCTTTCCATTTGACGGATAAATATGTGGCAT | [1300] |
| remissum_NC_NR3 | AATRGCCTCGGATGTGACCTCTTTCCATTTGACGGATAAATATGTGGCAT | [1300] |

Appendix 1. (Cont.)

| Taxa | Sequence | Base # |
|---|---|---|
| 'snowi AL BC 4+6' | GATGGCCTCAGATGTGACCTCGTTCCACTTGACGGATAAATATGTGGCAT | [1300] |
| snowi_TN_CC | GATGGCYTCAGATGTGACCTCTTTCCACTTGACGGATAAATATGTGGCAT | [1300] |
| 'snowi AL BC 4+4' | GATGGCCTCGGATGTGACCTCTTTCCATTTGACGGATAAATATGTAGCAT | [1300] |
| taxodium_GA_CC2 | AATAGCCTCGGATGTGACTTCTTTCCATTTGACGGATAAATATGTGGCGT | [1300] |
| taxodium_FL_CR | AATAGCCTCGGATGTGACTTCTTTCCATYTGACGGATAAATATGTGGCAT | [1300] |
| underhilli_AL_HC3 | RATGGCCTCGGATGTGACCTCTTTCCATTTGACRGATAAATATGTRGCAT | [1300] |
| underhilli_GA_FR | GATGGCTTCAGATGTGACCTCTTTCCATTTGACAGATAAATATGTAGCAT | [1300] |
| underhilli_GA_FS | AATGGCCTCGGATGTGACCTCTTTCCATTTGACGGATAAATATGTGGCAT | [1300] |

| | | |
|---|---|---|
| tuberosum | ACACGACACTAACCCAACTTCATTTCGTGAAATTGATAACCGATCACACC | [1350] |
| verecundum | ACACAACACTAACTCAACTTCATTTCGTGAAATTG---AACGATAACTCT | [1184] |
| decimatum | ---------- | [1218] |
| apricarium | ACACAACACTGACTCAACTTCATTTCCTGAAATTG---ACCGATAACACC | [1347] |
| reptans | ACACAACCCTGACTCAACTTCATTTCGTGAAAYTG---ACCGATAACACC | [1347] |
| anchist_AL_HC | ACACGACACTGACTCAACTGCATTTCGTGAAATTG---ACTGATACTGCC | [1347] |
| anchist_DE_DR | ACACGACACTGACTCAAYTGCATTTCGTGAAATTG---ACTGATACTGCC | [1347] |
| anchist_ME_AR | ACACGACACTGACTCAACTGCATTTCGTGAAATTG---ACTGATACTGCC | [1347] |
| anchist_NC_NR | ACACGACACTGACTCAACTGCATTTCGTGAAATTG---RCTGATACTGCC | [1347] |
| anchist_ME_KR | ACACGACACTGACTCAACTGCATTTCGTGAAATTG---ACTGATACTGCC | [1347] |
| aranti_GA_FS | ACACGACCCTGACTCAACTTAATTTCGTGAAATTG---ACTGATACCGCC | [1347] |
| aranti_GA_AS | ACACGACCCTGACTCAACTTAATTTCGTGAAATTG---ACTGATACCGCC | [1347] |
| aranti_AL_HC | ACACGACCCTGACTCAACTTAATTTCGTGAAATTG---ACTGATACCGCC | [1347] |
| aranti_SC_LR | ACACGACCCTGACTCAACTTAATTTCGTGAAATTG---ACTGATACCGCC | [1347] |
| chlorum_NC_GC3 | ACACGACCCTGACTCAACTGAATTTCGTGAAATTG---ACTGATACCGCC | [1347] |
| chlorum_NC_GC1 | ACACGACCCTGACTCAACTGAATTTCGTGAAATTG---ACTGATACCGCC | [1347] |
| chlorum_NC_GC4 | ACACGACCCTGACTCAACTGAATTTCGTGAAATTG---ACTGATAACGCC | [1347] |
| confusum_TN_LR | ACACGACCCTGACTCAACTGAATTTCGTGAAATTG---ACTGATACCGCC | [1347] |
| confusum_GA_GC | ACACGACCCTGACTCAACTGAATTTCGTGAAATTG---ACTGATAACGCC | [1347] |
| confusum_GA_EC | ACACGACCCTGACTCAACTGAATTTCGTGAAATTG---ACTGATACCGCC | [1347] |
| confusum_TX_SJR | ACACGACCCTGACTCAACTGAATTTCGTGAAATTG---ACTGATACCGCC | [1347] |
| confusum_TX_SR | ACACGAACCTGACTCAACTGAATTTCGTGAAATTG---ACTGATACCGCC | [1347] |
| confusum_TX_Bayou | ACACGACCCTGACTCAACTGAATTTCGTGAAATTG---ATTGATAACGCC | [1347] |
| definitum_PA_LC | ACACGAGCCTGACTCAACTGAATTTCGTGAAATTG---ACTGATACCGCC | [1347] |
| definitum_SC_GC | ACACGAGCCTGACTCAACTGAATTTCGTGAAATTG---ACTGATACCGCC | [1347] |
| dixiense_GA_WC | ACACGGCTCTGACTCAACTTCATTTCGTGAAATTG---ACTGATAACGCT | [1347] |

| | | |
|---|---|---|
| dixiense_SC_LBC | ACACGGCTCTGACTCAACTTCATTTCGTGAAATTG---ACTGATAACGCT | [1347] |
| dixiense_NC_QC | ACACGGCTCTGACTCAACTTCATTTCGTGAAATTG---ACTGATAACGCT | [1347] |
| dixiense_FL_CC | ACACGGCTCTGACTCAACTTCATTTCGTGAAATTG---ACTGATAACGCT | [1347] |
| fibrinflatum_PA_DR | ACACGACCCTGACTCAACTGAATTTCGTGAAATTG---ACTGATACCGTG | [1347] |
| fibrinflatum_ME_AR | ACACGACCCTGACTCAACTGAATTTCGTGAAATTG---ACTGATACCGTC | [1347] |
| fibrinflatum_GA_FR | ACACGACCCTGACTCAACTGAATTTCGTGAAATTG---ACTGATATCGTC | [1347] |
| haysi_AL_BCC3 | ACACTACACTGACTCAACTGCATTTCGTGAAATTG---ACTGATAACGCC | [1347] |
| haysi_TX_SJR | ACACTACACTGACTCAACTGCATTTCGTGAAATTG---ACTGATAACGCC | [1347] |
| infenestrum_NC_RR | ACACGACMCTGACTCAACTGCATTTCRTGAAATTG---ACTGATARCGCC | [1347] |
| infenestrum_SC_RBC | ACACGACACTGACTCAACTGCATTTCGTSAAATTG---ACTGATACTGCC | [1347] |
| jenningsi_TN_PR | ACACGACTCTGACTCAACTGAATTTCGTGAAATTG---GCTGATACCGCT | [1347] |
| jenningsi_NC_ER | ACACGACCCTGACTCAACTGAATTTCGTGAAATTG---RCTGATACYGCT | [1347] |
| jenningsi_SC_FC | ACACGACTCTGACTCAACTGAATTTCGTRAAATTG---RCTGATACCGCC | [1347] |
| jenningsi_PA_BR | ACACGACTCTGACTCAACTGAATTTCGTGAAATTG---ACTGATACCGCT | [1347] |
| jenningsi_GA_AR | ACACGACTCTGACTCAACTGAATTTCGTGAAATTG---ACTGATACCGCT | [1347] |
| jonesi_FL_CC1 | ACACGACCCTGACTCAACTGCATTTCGTGAAATTG---ACTGATACCGCC | [1347] |
| jonesi_AL_BCC | ACACGACCCTGACTCAACTGAATTTCGTGAAATTG---ACTGATACAGCC | [1347] |
| jonesi_NC_CC | ACACGACCCTGACTCAACTGCATTTCGTGAAATTG---ACTGATACCGCY | [1347] |
| jonesi_NC_QC | ACACGACCCTGACTCAACTGCATTTCGTGAAATTG---ACTGATACCGCY | [1347] |
| jonesi_GA_WC | ACACGACCCTGACTCAACTGCATTTCGTGAAATTG---ACTGATAACGCT | [1347] |
| krebsorum_NC_MC | ACACGACACTGACTCAACTGCATTTCGTGAAATTA---ACTGATAACGCC | [1347] |
| krebsorum_SC_CC2 | ACACGACACTGACTCAACTGCATTTCGTGAAATTA---ACTGATAACGCC | [1347] |
| lakei_PA_NC | ACACGACCCTGACTCAACTGAATTTCGTGAAATTG---ACTGATAACGCT | [1347] |
| lakei_SC_BR | ACACGACCCTGACTCAACTGAATTTCGTGAAATTG---ACTGATACCGCC | [1347] |
| lakei_FL_CR | ACACGACCCTGACTCAACTGCATTTCRTGAAATTG---ACTGATACCGCC | [1347] |

Appendix 1. (Cont.)

| Taxa | Sequence | Base # |
|---|---|---|
| lakei_Taunt_8_MA_TR | ACACGACCCTGACTCAACTGAATTTCGTGAAATTG---ACTGATAACGCC | [1347] |
| lakei_Taunt_9_MA_TR | ACACGACCCTGACTCAACTGAATTTCGTGAAATTG---ACTGATACCGCC | [1347] |
| luggeri_NWT | ACACGACCCTGACTCAACTTCATTTTGTCAAATTG---ACTGATAACGCC | [1347] |
| luggeri_NE_FR | ACACGACCCTGACTCAACTTCATTTTGTCAAATTG---ACTGATAACGCC | [1347] |
| luggeri_NC_HR | ACACGACCCTGACTCAACTTCATTTTGTCAAATTG---ACTGATAACGCC | [1347] |
| luggeri_KY_GR3 | ACACGACCCTGACTCAACTGCATTTCGTCAAATGG---ATTGATAACGCC | [1347] |
| 'notiale AL BC5+6' | ACACGACCCTGACTCAACTGAATTTYGTGAAATTG---AGTGATACCGTC | [1347] |
| notiale_VA_RR | ACACGACCCTGACTCAACTGAATTTCGTGAAATTG---ACTGATACCGTC | [1347] |
| notiale_TN_CC | ACACGACCCTGACTCAACTGAATTTCGTGAAATTG---ACTGATACCGTC | [1347] |
| notiale_SC_RBC | ACACGACCCTGACTCAACTGAATTTTGTGAAATTG---ACTGATACMGCC | [1347] |
| 'notiale AL BC6+6' | ACACGACCCTGACTCAACTGAATTTCGTGAAATTG---ACTGATACCGTC | [1347] |
| nyssa_AL_BC | ACACGACACTGACTCARCTGCATTTCGTGAAATTG---ACTGATACTGCC | [1347] |
| nyssa_ME_AR | ACACGACACTGACTCAACTGCATTTCGTGAAATTG---ACTGATACTGCC | [1347] |
| nyssa_VA_RR | ACACGACACTGACTCAACTGCATTTCGTGAAATTG---ACTGATACTGCC | [1347] |
| nyssa_ME_PR | ACACGACACTGACTCAGCTGCATTTCGTGAAATTG---ACTGATACTGCC | [1347] |
| nyssa_NC_TR | ACACGACACTGACTCAACTGCATTTCGTGAAATTG---ACTGATACTGCC | [1347] |
| ozarkense_MO_GR2 | ACACGACACTGACTCAACTGCATTTCGTGAAATTG---ACTGATACCACC | [1347] |
| ozarkense_MO_GR1 | ACACGACACTGACTCAACTGCATTTCGTGAAATTG---ACTGATACCACC | [1347] |
| penobsco_ME_PR1 | ACACGACACTGACTCAACTGAATTTCGTGAAATTG---ACTGATACCGCC | [1347] |
| penobsco_ME_PR2 | ACACGACACTGACTCAACTGAATTTCGTGAAATTG---ACTGATAACGCC | [1347] |
| podostemi_NC_TR | ACACGACACTGACTCAACTGAATTTCGTAAAATTG---ACTGATACTGCC | [1347] |
| podostemi_GA_AS | ACACGACACTGACTCAACTGAATTTCGTAAAATTG---ACTGATACTGCC | [1347] |
| podostemi_MS_BC | ACACGACACTGACTCAACTGAATTTCGTAAAATTG---ACTGATACTGCC | [1347] |
| podostemi_GA_CR | ACACGACACTGACTCAACTGAATTTCGTAAAATTG---ACTGATACTGCC | [1347] |
| remissum_NC_NR2 | ACACGACACTGACTCAACTGAATTTCGTGAAATTG---ACTGATAACGCC | [1347] |
| remissum_NC_NR1 | AYACGACACTGACTCAACTGAATTTCGTGAAATTG---ACTGATAMCGCC | [1347] |
| remissum_NC_NR3 | ACACGACACTGACTCAACTGAATTTCGTRAAATTG---ACTGATAACGYC | [1347] |
| 'snowi AL BC 4+6' | ACACGACCCTGACTCAACTGAATTTCGTGAAATTG---ACTGATACCGTC | [1347] |
| snowi_TN_CC | ACACGACCCTGACTCAACTGAATTTCGTGAAATTG---ACTGATACCGTC | [1347] |
| 'snowi AL BC 4+4' | ACACGACCCTGACTCAACTGAATTTCGTGAAATTG---AGTGATACCGTC | [1347] |
| taxodium_GA_CC2 | ACACGACCCTGACTCAACTGAATTTCGTGAAATTG---ACTGATACCGCC | [1347] |
| taxodium_FL_CR | ACACGACCTTGACTCAACTTMATTTCGTGAAATTG---ACTGATAMCGCC | [1347] |
| underhilli_AL_HC3 | ACACGACCCTGACTCAACTGAATTTYGTGAAATTG---ACTGATACAGCC | [1347] |
| underhilli_GA_FR | ACACGACCCTGACTCAACTGAATTTCGTGAAATTG---ACTGATACCGTC | [1347] |
| underhilli_GA_FS | ACACGACCCTGACTCAACTGAATTTCGTGAAATTG---ACTGATACCGTC | [1347] |

| | | |
|---|---|---|
| tuberosum | GACTTGAGGCAGCCCATCGAAAGCCGACGAATGGAGCGGGGCGCACGAAT | [1400] |
| verecundum | GACTTAAGGCAACCCATCGAAAGTCGAAGAATGGAGCGAGGTGCACGCAT | [1234] |

| | | |
|---|---|---|
| decimatum | ---------- | [1218] |
| apricarium | GACTTAAGGCAGCCCATCGAAAGTCGACGAATGGAGCGAGGCGCGCGGAT | [1397] |
| reptans | GACTCAAGACAGCCCATCGAAAGTCGACGAATGGAGCGAGGCGCACGGAT | [1397] |
| anchist_AL_HC | GACTCAAGGCAGCCCATYGAAAGCCGACGAATGGAGCGAGGCGCACGTAT | [1397] |
| anchist_DE_DR | GACTCAAGGCAGCCCATYGAAAGCCGACGAATGGAGCGAGGCGCACGTAT | [1397] |
| anchist_ME_AR | GACTCAAGGCAGCCCATCGAAAGCCGACGAATGGAGCGAGGCGCACGTAT | [1397] |
| anchist_NC_NR | GACTCAAGGCAGCCCATCGAAAGCCGACGAATGGAGCGAGGCGCACGTAT | [1397] |
| anchist_ME_KR | GACTCAAGGCAGCCCATCGAAAGCCGACGAATGGAGCGAGGCGCWCGTAT | [1397] |
| aranti_GA_FS | GATCTAAGGCAGCCCATCGAAAGCCGACGAATGGAGCGAGGCTCACGAAT | [1397] |
| aranti_GA_AS | GATCTAAGGCAGCCCATCGAAAGCCGACGAATGGAGCGAGGCTCACGAAT | [1397] |
| aranti_AL_HC | GATCTAAGGCAGCCCATCGAAAGCCGACGAATGGAGCGAGGCKCACGAAT | [1397] |
| aranti_SC_LR | GATCTAAGGCAGCCCATCGAAAGCCGACGAATGGAGCGAGGCGCACGAAT | [1397] |
| chlorum_NC_GC3 | GACTTAAGGCAGCCCATCGAAAGCCGACGAATGGAGCGAGGAGCACGAAT | [1397] |
| chlorum_NC_GC1 | GACTTAAGGCAGYCCATCGAAAGCCGACGAATGGAGCGAGGAGCACGAAT | [1397] |
| chlorum_NC_GC4 | GAGCTAAGGCAGCCCATCGAAAGCCGACGAATGGAGCGAGGAGCACGAAT | [1397] |
| confusum_TN_LR | GACTTTAGGCAGCCCATCGAAAGCCGACGAATGGAGCGAGGAGCACGAAT | [1397] |
| confusum_GA_GC | GAGCTAAGGCAGCCCATCGAAAGCCGACGAATGGAGCGAGGAGCACGAAT | [1397] |
| confusum_GA_EC | GACTTWAGGCAGCCCATCGAAAGCCGACGAATGGAGCGAGGAGCACGAAT | [1397] |
| confusum_TX_SJR | GACTTCAGGCAGCCCATCGAAAGCCGACGAATGGAGCGAGGAGCACGAAT | [1397] |
| confusum_TX_SR | GACTTCAGGCAGCCCATCGAAAGCCGACGAATGGAGCGAGGAGCACGAAT | [1397] |
| confusum_TX_Bayou | GAGCTAAGGCAGCCCATCGAAAGCCGACGAATGGAGCGAGGAGCACGAAT | [1397] |
| definitum_PA_LC | GACTTAAGGCAGCCCATCGAAAGCCGACGAATGGAGCGAGGAGCGCGAAT | [1397] |

Appendix 1. (Cont.)

| Taxa | Sequence | Base # |
|---|---|---|
| definitum_SC_GC | GACTTAAGGCAGCCCATCGAAAGCCGACGAATGGAGCGAGGAGCGCGAAT | [1397] |
| dixiense_GA_WC | GACTTCAGGCAGCCCATTGAAAGCCGGCGAATGGAGCGAGGTGCACGAAT | [1397] |
| dixiense_SC_LBC | GACTTCAGGCAGCCCATTGAAAGCCGGCGAATGGAGCGAGGTGCACGAAT | [1397] |
| dixiense_NC_QC | GACTTCAGGCAGCCCATTGAAAGCCGGCGAATGGAGCGAGGTGCACGAAT | [1397] |
| dixiense_FL_CC | GACTTCAGGCAGCCCATTGAAAGCCGGCGAATGGAGCGAGGTGCACGAAT | [1397] |
| fibrinflatum_PA_DR | GACTTAAGGCAGCCCATCGAAAGCCGACGAATGGAGCGAGGCGCGCGAAT | [1397] |
| fibrinflatum_ME_AR | GACTTAAGGCAGCCCATYGAAAGTCGACGAATGGAGCGAGGCGCACGAAT | [1397] |
| fibrinflatum_GA_FR | GACTTAAGGCAGCCCATCGAAAGCCGACGAATGGAGCGAGGCGCGCGAAT | [1397] |
| haysi_AL_BCC3 | GAGCTAAGGCAGTCCATTGAAAGCCGGCGAATGGAGCGAGGCGCACGAAT | [1397] |
| haysi_TX_SJR | GAGCTAAGGCAGTCCATTGAAAGCCGGCGAATGGAGCGAGGCGCACAAAT | [1397] |
| infenestrum_NC_RR | GAGCTAAGGCAACCCATCGAAAGCCGACGAATGGAGCGAGGCGCACGAAT | [1397] |
| infenestrum_SC_RBC | GACTCAAGGCAGCCCATCGAAAGCCGACGAATGGAGCGAGGCGCACGTAT | [1397] |
| jenningsi_TN_PR | GACTTCAGGCAGCCTATCGAAAGCCGACGAATGGAGCGAGGCGCACGAAT | [1397] |
| jenningsi_NC_ER | GACTTCAGGCAGCCCATCGAAAGGCGACGAATGGAGCGAGGCGCMCGAAT | [1397] |
| jenningsi_SC_FC | GACTTCAGGCAGCCYATCGAAAGCAGACGAATGGAGCGAGGAGCACGAAT | [1397] |
| jenningsi_PA_BR | TACTTCAGGCAACCTATCGAAAGCAGACGAATGGAGCGAGGCGCACGAAT | [1397] |
| jenningsi_GA_AR | GACTTCAGGCAGCCCATCGAAAGCCGACGAATGGAGCGAGGCGCACGAAT | [1397] |
| jonesi_FL_CC1 | GACTTAAGGCAGCCCATCGAAAGCCGACGAATGGAGCGAGGAGCACGAAT | [1397] |
| jonesi_AL_BCC | GACTTCAGGCAGCCGATCGAAAGCCGACGAATGGAGCGAGGAGCACGAAT | [1397] |
| jonesi_NC_CC | GACTTAAGGCAGCCYATCGAAAGCCGACGAATGGAGCGAGGMGCACGAAT | [1397] |
| jonesi_NC_QC | GACTTAAGGCAGCCYATYGAAAGCCGACGAATGGAGCGAGGMGCACGAAT | [1397] |
| jonesi_GA_WC | GACTTAAGGCAGCCTATTGAAAGCCGACGAATGGAGCGAGGCGCACGAAT | [1397] |
| krebsorum_NC_MC | GAGCTAAGGCAGCCCATCGAAAGCCGACGAATGGAGCGAGGCGCACGAAT | [1397] |
| krebsorum_SC_CC2 | GAGCTAAGGCAGCCCATCGAAAGCCGACGAATGGAGCGAGGCGCACGAAT | [1397] |
| lakei_PA_NC | GACTTAAGGCAGCCCATTGAAAGCCGACGAATGGAGCGAGGCGCACGTAT | [1397] |
| lakei_SC_BR | GACTTAAGGCAGCCCATCGAAAGCCGACGAATGGAGCGAGGAGCACGAAT | [1397] |
| lakei_FL_CR | GASCTAAGGCAGCCCATCGAAAGCCGACGAATGGAGCGAGGAGCACGAAT | [1397] |
| lakei_Taunt_8_MA_TR | GAGCTAAGGCAGCCCATCGAAAGCCGACGAATGGAGCGAGGAGCACGAAT | [1397] |
| lakei_Taunt_9_MA_TR | GASTTAAGGCAGCCCATCGAAAGCCGACGAATGGAGCGAGGAGCACGAAT | [1397] |
| luggeri_NWT | GATTTAAGGCAGCCTATCGAAAGCCGACGAATGGAGCGAGGAGCACGAAT | [1397] |
| luggeri_NE_FR | GATTTAAGGCAGCCTATCGAAAGCCGACGAATGGAGCGAGGAGCACGRAT | [1397] |
| luggeri_NC_HR | GATTTAAGGCAGCCTATCGAAAGCCGACGAATGGAGCGAGGAGCACGAAT | [1397] |
| luggeri_KY_GR3 | GAGCTAAGGCAGCCTATCGAAAGCCGACGAATGGAGCGAGGAGCACGAAT | [1397] |
| 'notiale AL BC5+6' | GACTTAAGRCAGCCCATCGAAAGCCGACGAATGGAGCGAGGCGCACGAAT | [1397] |
| notiale_VA_RR | GACTTAAGGCAGCCCATCGAAAGCCGACGAATGGAGCGAGGCGCRCGAAT | [1397] |
| notiale_TN_CC | GACTTAAGGCAGCCCATYGAAAGTCGACGAATGGAGCGAGGCGCACGAAT | [1397] |
| notiale_SC_RBC | GACTYAAGGCAGCCCRTCGAAAGCCGACGAATGGAGCGAGGCGCACGAAT | [1397] |
| 'notiale AL BC6+6' | GACTTAAGGCAGCCCATCGAAAGCCGACGAATGGAGCGAGGCGCACGAAT | [1397] |
| nyssa_AL_BC | GACTCAAGGCAGCCCATCGAAAGCCGACGAATGGAGCGAGGCGCACGTAT | [1397] |
| nyssa_ME_AR | GACTCAAGGCAGCCCATCGAAAGYCGACGAATGGAGCGAGGCGCACGTAT | [1397] |
| nyssa_VA_RR | GACTCAAGGCAGCCCATCGAAAGCCGACGAATGGAGCGAGGCGCACGTAT | [1397] |
| nyssa_ME_PR | GACTCAAGGCAGCCCATCGAAAGYCGACGAATGGAGCGAGGCGCACGTAT | [1397] |
| nyssa_NC_TR | GACTCAAGGCAGCCCATCGAAAGTCGACGAATGGAGCGAGGCGCACGTAT | [1397] |

| | | |
|---|---|---|
| ozarkense_MO_GR2 | GACCTAAGGCAGCCCATCGAAAGTCGACGAATGGAGCGAGGMGCACGAAT | [1397] |
| ozarkense_MO_GR1 | GACCTAAGGCAGCCCATCGAAAGCCGACGAATGGAGCGAGGAGCACGAAT | [1397] |
| penobsco_ME_PR1 | GACTTAAGGCAGCCCATCGAAAGCCGACGAATGGAGCGAGGCGCACGAAT | [1397] |
| penobsco_ME_PR2 | GAGCTAAGGCAACCCATCGAAAGCCGACGAATGGAGCGAGGCGCACGAAT | [1397] |
| podostemi_NC_TR | GACTTAAGGCAGCCCATCGAAAGCCGACGAATGGAGCGAGGCGCTCGAAT | [1397] |
| podostemi_GA_AS | GACTTAAGGCAGCCCATCGAAAGCCGACGAATGGAGCGAGGCGCTCGAAT | [1397] |
| podostemi_MS_BC | GACTTAAGGCAGCCCATCGAAAGCCGACGAATGGAGCGAGGCGCTCGAAT | [1397] |
| podostemi_GA_CR | GACTTAAGGCAGCCCATCGAAAGCCGACGAATGGAGCGAGGCGCTCGAAT | [1397] |
| remissum_NC_NR2 | GAGCTAAGGCAACCCATCGAAAGCCGACGAATGGAGCGAGGCGCACGAAT | [1397] |
| remissum_NC_NR1 | GAGTTAAGGCARCCCATCGAAARCCGACGAATGGAGCGAGGCGCACGAAT | [1397] |
| remissum_NC_NR3 | GAGCTRAGGCAACCCATCGAAAGCCGACGAATGGAGCGAGGCGCACGAAT | [1397] |
| 'snowi AL BC 4+6' | GACTTAAGGCAGCCCATCGAAAGCCGACGAATGGAGCGAGGCGCACGAAT | [1397] |
| snowi_TN_CC | GACTTAAGGCAGCCCATCGAAAGCCGACGAATGGAGCGAGGCGCACGAAT | [1397] |
| 'snowi AL BC 4+4' | GACTTAAGACAGCCCATCGAAAGCCGACGAATGGAACGAGGCGCACGAAT | [1397] |
| taxodium_GA_CC2 | GACTTAAGGCAGCCCATCGAAAGCCGACGAATGGAGCGAGGAGCACGAAT | [1397] |
| taxodium_FL_CR | GACTTAAGGCAGCCYATCGAAAGCCGACGAATGGAGCGAGGAGCACGAAT | [1397] |
| underhilli_AL_HC3 | GACTTAAGGCAGCCCATYGAAASCCGACGAATGGAGCGAGGCGCRCGAAT | [1397] |
| underhilli_GA_FR | GACTTAAGGCAGCCCATTGAAAGYCGACGAATGGAGCGAGGCGCACGAAT | [1397] |
| underhilli_GA_FS | GACTTAAGGCAGCCCATCGAAAGCCGACGAATGGARCGAGGCGCGCGAAT | [1397] |

Appendix 1. (Cont.)

| Taxa | Sequence | Base # |
|---|---|---|
| tuberosum | CGTAACGATTGTTCCGAAAAGCTCAAAATGTGTTTTYCAACTGCCTCGTG | [1450] |
| verecundum | CGTAACGATTGTTCCAAAAAGTTCGAAATGTGTCTTCCAACTGCCTCGTG | [1284] |
| decimatum | ---------- | [1218] |
| apricarium | TGTAACGATTGTCCCGAAAAGTTCAAAATGTGTGTTCCAACTGCCTCGTG | [1447] |
| reptans | CGTAACGATTGTCCCGAAAAGTTCAAAATGTGTGTTCCAACTGCCTCGTG | [1447] |
| anchist_AL_HC | CGTTACGATTGTCCCGAAAAGTTCAAAATGTGTTTTCCAATTGCCTCGTG | [1447] |
| anchist_DE_DR | CGTTACGATSGTCCCGAAAAGTTCAAAATGTGTTTTCCAATTGCCTCGTG | [1447] |
| anchist_ME_AR | CGTAACGATTGTCCCGAAAAGTTCAAAATGTGTTTTCCAATTGCCTCGTG | [1447] |
| anchist_NC_NR | CGTTACGATTGTCCCGAAAAGTTCAAAATGTGTTTTCCAATTGCCTCGTG | [1447] |
| anchist_ME_KR | CGTTACGATTGTCCCGAAAAGTTCAAAATGTGTTTTCCAATTGCCTCGTG | [1447] |
| aranti_GA_FS | CGTAACGATTGTCCCAAAAAGTTCAAAATGTATTTTTCAACTGCCTCGTG | [1447] |
| aranti_GA_AS | CGTAACGATTGTCCCAAAAAGTTCAAAATGTATTTTTCAACTGCCTCGTG | [1447] |
| aranti_AL_HC | CGTAACGATTGTCCCAAAAAGTTCAAAATGTATTTTTCAACTGCCTCGTG | [1447] |
| aranti_SC_LR | CGTAACGATTGTCCCAAAAAGTTCAAAATGTATTTTTCAACTGCCTCGTG | [1447] |
| chlorum_NC_GC3 | CGTAACAATTGTCCCGAAAAGTTCAAAATGTGTTTTCCAACTGCCTCGTG | [1447] |
| chlorum_NC_GC1 | CGTRACGATCGTCCCGAAGAGTTCAAAATGTGTTTTCCAACTGCCTCGTG | [1447] |
| chlorum_NC_GC4 | CGTAACAATTGTCCCGAAAAGTTCAAAATGTGTTTTCCAACTGCCTCGTG | [1447] |
| confusum_TN_LR | CGTAACAATTGTCCCGAAAAGTTCAAAATGTGTTTTCCAACTTCCTCGTG | [1447] |
| confusum_GA_GC | CGTAACAATTGTCCCGAAAAGTTCAAAATGTGTTTTCCAACTTCCTCGTG | [1447] |
| confusum_GA_EC | CGTAACAATTGTCCCGAAAAGTTCAAAATGTGTTTTCCAACTGCCTCGTG | [1447] |
| confusum_TX_SJR | CGTAACAATTGTCCCGAAAAGTTCAAAATGTGTTTTCCAACTKCCTCGTG | [1447] |
| confusum_TX_SR | CGTTACGATTGTCCCGAAGAGTTCAAAATGTGTTTTCCAACTGCCTCGTG | [1447] |
| confusum_TX_Bayou | CGTAACAATTGTCCCGAAAAGTTCAAAATGTGTTTTCCAACTGCCTCGTG | [1447] |
| definitum_PA_LC | CGTAACAATTGTCCCGAAAAGTTCAAAATGTGTTTTCCAACTGCCTCGTG | [1447] |
| definitum_SC_GC | CGTAACAATTGTCCCGAAAAGTTCAAAATGTGTTTTCCAACTGCCTCGTG | [1447] |
| dixiense_GA_WC | CGTAACAATAGTCCCGAAAAGTTCAAAGTGTGTTTTTCAACTGCCTCGTG | [1447] |
| dixiense_SC_LBC | CGTAACAATAGTCCCGAAAAGTTCAAAGTGTGTTTTTCAACTGCCTCGTG | [1447] |
| dixiense_NC_QC | CGTAACAATAGTCCCGAAAAGTTCAAAGTGTGTTTTTCAACTGCCTCGTG | [1447] |
| dixiense_FL_CC | CGTAACAATAGTCCCGAAAAGTTCAAAGTGTGTTTTTCAACTGCCTCGTG | [1447] |
| fibrinflatum_PA_DR | CGTTACGATTGTCCCGAAGAGTTCAAAATGTGTTTTCCAACTGCCTCGTG | [1447] |
| fibrinflatum_ME_AR | CGTTACGATTGTCCCGAAGAGTTCAAAATGTGTTTTCCAAYTGCCTCGTG | [1447] |
| fibrinflatum_GA_FR | CGTTACGATTGTCCCGAAGAGTTCAAAATGTGTTTTCCAACTGCCTCGTG | [1447] |
| haysi_AL_BCC3 | CGTTACGATAGTCCCGAAGAGTTCAAAATGTGTTTTCCAACTGCCTCGTG | [1447] |
| haysi_TX_SJR | CGTTACGATAGTCCCGAAGAGTTCAAAATGTGTTTTCCAACTGCCTCGTG | [1447] |
| infenestrum_NC_RR | CGTTACGATTGTSCCGAARAGTTCAAAATGTGTTTTCCAAYTGCCTCGTG | [1447] |
| infenestrum_SC_RBC | CGTTACGATTGTGCCGAAGAGTTCAAAATGTGTTTTCCAACTGCCTCGTG | [1447] |
| jenningsi_TN_PR | CGTTACGATTGTCCCAAAAAGTTCAAAATGTGTTTTTCAACTGCCTCGTG | [1447] |
| jenningsi_NC_ER | CGTTACGATTGTCCCRAAGAGTTCAAAATGTGTTTTTCAACTGCCTCGTG | [1447] |
| jenningsi_SC_FC | CGTTACGATTGTTCCGAAAAGTTCAAAATGTGTTTTTCAACTGCCTCGTG | [1447] |
| jenningsi_PA_BR | CGTTACGATTGTCCCGAAGAGTTCAAAATGTGTTTTTCAACTGCCTCGTG | [1447] |
| jenningsi_GA_AR | CGTTACGATTGTCCCAAAAAGTTCAAAATGTGTTTTTCAACTGCCTCGTG | [1447] |
| jonesi_FL_CC1 | CGTTACGATTGTCCCGAAGAGTTCAAAATGTGTTTTCCAACTGCCTCGTG | [1447] |
| jonesi_AL_BCC | CGTAACRATTGGTCCGAAGAGTTCAAAATGTGTTTTCCAACTGCCTCGTG | [1447] |
| jonesi_NC_CC | CGTKACGATTGTCCCGAAGAGTTCAAAATGTGTTTTCCAACTGCCTCGTG | [1447] |
| jonesi_NC_QC | CGTKACGATTGTCCCGAAGAGTTCAAAATGTGTTTTCCAACTGCCTCGTG | [1447] |
| jonesi_GA_WC | CGTGACAATTGTCCCGAAGAGTTCAAAATGTGTATTCCAACTGCCTCGTG | [1447] |

| | | |
|---|---|---|
| krebsorum_NC_MC | CGTTACGATTGTCCCGAAGAGTTCAAAATGTGTTTTCCAACTGCCTCGTG | [1447] |
| krebsorum_SC_CC2 | CGTTACGATTGTCCCGAAGAGTTCAAAATGTGTTTTCCAACTGCCTCGTG | [1447] |
| lakei_PA_NC | CGTTACGATTGTCCCGAAGAGTTCAAAATGTGTTTTCCAACTGCCTCGTG | [1447] |
| lakei_SC_BR | CGTAACAATTGTSCCGAAAAGTTCAAAATGTGTTTTCCAACTGCCTCGTG | [1447] |
| lakei_FL_CR | CGTAACAATTGTCCCGAAAAGTTCAAAATGTGTTTTCCAACTGCCTCGTG | [1447] |
| lakei_Taunt_8_MA_TR | CGTAACAATTGTCCCGAAAAGTTCAAAATGTGTTTTCCAACTGCCTCGTG | [1447] |
| lakei_Taunt_9_MA_TR | CGTAACAATTGTCCCGAAAAGTTCAAAATGTATTTTCCAACTGCCTCGTG | [1447] |
| luggeri_NWT | CGTCACAATTGTCCCGAAGAGTTCAAAATGTGTTTTCCAACTGCCTCGTG | [1447] |
| luggeri_NE_FR | CGTCACAATTGTCCCGAAGAGTTCAAAATGTGTTTTCCAACTGCCTCGTG | [1447] |
| luggeri_NC_HR | CGTAACAATTGTCCCGAAAAGTTCAAAATGTGTTTTCCAACTGCCTCGTG | [1447] |
| luggeri_KY_GR3 | CGTAACAATTGTCCCGAAAAGTTCAAAATGTGTTTTCCAACTGCCGCGTG | [1447] |
| 'notiale AL BC5+6' | CGTTACGATTGTCCCGAAGAGTTCAAAATGTGTTTTCCAACTGCCTCGTG | [1447] |
| notiale_VA_RR | CGTTACGATTGTCCCGAAGAGTTCAAAATGTGTTTTCCAACTGCCTCGTG | [1447] |
| notiale_TN_CC | CGTTACGATTGTCCCGAAGAGTTCAAAATGTGTTTTCCAACTGCCTCGTG | [1447] |
| notiale_SC_RBC | CGTTACGATTGTCCCGAAGAGTTCAAAATGTGTTTTYCAAYTGCCTCGTG | [1447] |
| 'notiale AL BC6+6' | CGTTACGATTGTCCCGAAGAGTTCAAAATGTGTTTTCCAACTGCCTCGTG | [1447] |

Appendix 1. (Cont.)

| Taxa | Sequence | Base # |
|---|---|---|
| nyssa_AL_BC | CGTTACGATTGTCCCGAAAAGTTCAAAATGTGTTTTCCAATTGCCTCGTG | [1447] |
| nyssa_ME_AR | CGTTACGATTGTCCCGAAAAGTTCAAAATGTGTTTTCCAATTGCCTCGTG | [1447] |
| nyssa_VA_RR | CGTTACGATTGTCCCGAAAAGTTCAAAATGTGTTTTCCAATTGCCTCGTG | [1447] |
| nyssa_ME_PR | CGTTACGATTGTCCCGAAAAGTTCAAAATGTGTTTTCCAATTGCCTCGTG | [1447] |
| nyssa_NC_TR | CGTTACGATTGTCCCGAAAAGTTCAAAATGTGTTTTCCAATTGCCTCGTG | [1447] |
| ozarkense_MO_GR2 | CGTTACGATTGTCCCGAAGAGTTCAAAATGTGTTTTCCAACTGCCTCGCG | [1447] |
| ozarkense_MO_GR1 | CGTTACGATTGTCCCGAAGAGTTCAAAATGTGTTTTCCAACTGCCTCGTG | [1447] |
| penobsco_ME_PR1 | CGTTACGATTGTGCCGAAGAGTTCAAAATGTGTTTTCCAACTGCCTCGTG | [1447] |
| penobsco_ME_PR2 | CGTTACGATTGTCCCGAAAAGTTCAAAATGTGTTTTTCAACTGCCACGTG | [1447] |
| podostemi_NC_TR | CGTTACGATTGTCCCGAAGAGTTCAAAATGTGTTTTTCAACTGCCTCGTG | [1447] |
| podostemi_GA_AS | CGTTACGATTGTCCCGAAGAGTTCAAAATGTGTTTTTCAACTGCCTCGTG | [1447] |
| podostemi_MS_BC | CGTTACGATTGTCCCGAAGAGTTCAAAATGTGTTTTTCAACTGCCTCGTG | [1447] |
| podostemi_GA_CR | CGTTACGATTGTCCCGAAGAGTTCAAAATGTGTTTTTCAACTGCCTCGTG | [1447] |
| remissum_NC_NR2 | CGTTACGATTGTGCCGAAGAGTTCAAAATGTGTTTTCCAACTGCCTCGTG | [1447] |
| remissum_NC_NR1 | CGTTACGATTGTGCCGAAGAGYTCAAAATGTGTTTTCCAACTACCTCGTG | [1447] |
| remissum_NC_NR3 | CGTTACGATTGTGCCGAAGAGTTCAAAATGTGTTTTCCAACTACCTCGTG | [1447] |
| 'snowi AL BC 4+6' | CGTTACGATTGTCCCGAAGAGTTCAAAATGTGTTTTCCAACTGCCTCGTG | [1447] |
| snowi_TN_CC | CGTTACGATTGTCCCGAAGAGTTCAAAATGTGTTTTCCAACTGCCTCGTG | [1447] |
| 'snowi AL BC 4+4' | CGTTACGATTGTCCCGAAGAGTTCAAAATGTGTTTTCCAACTGCCTCGTG | [1447] |
| taxodium_GA_CC2 | CGTAACAATTGTCCCGAAAAGTTCAAAATGTGTTTTCCAACTGCCTCGTG | [1447] |
| taxodium_FL_CR | MGTTACAATTGTCCCGRAAAGTTCAAAATGTGTTTTCCAACTGCCTCGTG | [1447] |
| underhilli_AL_HC3 | CGTTACGATTGTCCCGAAGAGTTCAAAATGTGTTTTCCAACTGCCTCGTG | [1447] |
| underhilli_GA_FR | CGTTACGATTGTCCCGAAGAGTTCAAAATGTGTTTTCCAACTGCCTCGTG | [1447] |
| underhilli_GA_FS | CGTTACGATTGTCCCGAAGAGTTCAAAATGTGTTTTCCAACTRCCTCGTG | [1447] |
| | | |
| tuberosum | GCAATTTGGAAGTCATCCATCCRCGGTTGCTGTCGATTCACTTGATTGGG | [1500] |
| verecundum | GCAATTTGGAAGTCATTCATCCGCGATTGCTGTCAATTCGCCTAATTGKA | [1334] |
| decimatum | -------------------------------------------------- | [1218] |
| apricarium | GCAATTTGGAAGTAATCCATCCGCGATTGCTATCGATTCACCTTATTGGG | [1497] |
| reptans | GCAATTTGGAAGTCATCCATCCGCGATTGCTGTCGATTCACCTGATCGGG | [1497] |
| anchist_AL_HC | GCAATTTGGAAGTCATCCATCCGCGATTGCTGTCAATTCACCTAATTGGG | [1497] |
| anchist_DE_DR | GCAATTTGGAAGTCATCCATCCGCGATTGCTGTCAATTCACCTAATTGGG | [1497] |
| anchist_ME_AR | GCAATTTGGAAGTCATCCATCCGCGATTGCTGTCAATTCACCTAATTGGG | [1497] |
| anchist_NC_NR | GCAATTTGGAAGTCATCCATCCGCGATTGCTGTCAATTCACCTAATTGGG | [1497] |
| anchist_ME_KR | GCAATTTGGAAGTCATCCATCCGCGATTGCTGTCAATTCACCTAATTGGG | [1497] |
| aranti_GA_FS | GCAATTTGGAAGTCATCCATCCACGATTGCTGTCGATTCACCTAATTGGG | [1497] |
| aranti_GA_AS | GCAATTTGGAAGTCATCCATCCACGATTGCTGTCGATTCACCTAATTGGG | [1497] |
| aranti_AL_HC | GCAATTTGGAAGTCATCCATCCACGATTGCTGTCGATTCACCTAATTGGG | [1497] |
| aranti_SC_LR | GCAATTTGGAAGTCATCCATCCACGATTGCTGTCGATTCACCTAATTGGG | [1497] |
| chlorum_NC_GC3 | GCAATTTGGAAGTCATCCATCCGCGATTGCTGTCGATTCACCTGATTGGG | [1497] |
| chlorum_NC_GC1 | GCAATTTGGAAGTCATCCATCCGCGATTGCTGTCGATTCACCTGATTGGG | [1497] |
| chlorum_NC_GC4 | GCAATTTAGAAGTCATCCATCCGCGATTGCTGTCGATTCACTTGATTGGG | [1497] |
| confusum_TN_LR | GCAATTTGGAAGTAATTCATCCGCGATTGCTATCGATTCACCTGATTGGG | [1497] |
| confusum_GA_GC | GCAATTTGGAAGTAATTCATCCGCGATTGCTATCGATTCACCTGATTGGG | [1497] |
| confusum_GA_EC | GCAATTTGGAAGTAATTCATCCGCGATTGCTRTCGATTCACCTGATTGGG | [1497] |
| confusum_TX_SJR | GCAATTTGGAAGTCATYCATCCGCGATTGCTRTCGATTCACCTGATTGGG | [1497] |
| confusum_TX_SR | GCAATTTGGAAGTCATCCATCCGCGATTGCTGTCGATTCACCTGATGGGG | [1497] |

| | | |
|---|---|---|
| confusum_TX_Bayou | GCAATTTGGAAGTCATCCATCCGCGATTGCTGTCGATTCACCTGATTGGG | [1497] |
| definitum_PA_LC | GCAATTTGGAAGTCATCCATCCGCGATTGCTGTCGATTCACCTGATTGGR | [1497] |
| definitum_SC_GC | GCAATTTGGAAGTCATCCATCCGCGATTGCTGTCGATTCACCTGATTGGG | [1497] |
| dixiense_GA_WC | GCAATTTGGAAGTAATTCATCCACGATTGCTGTCGATTCACCTGATTGGG | [1497] |
| dixiense_SC_LBC | GCAATTTGGAAGTAATTCATCCACGATTGCTGTCGATTCGCCTGATTGGG | [1497] |
| dixiense_NC_QC | GCAATTTGGAAGTAATTCATCCACGATTGCTGTCGATTCGCCTGATTGGG | [1497] |
| dixiense_FL_CC | GCAATTTGGAAGTAATTCATCCACGATTGCTGTCGATTCACCTGATTGGG | [1497] |
| fibrinflatum_PA_DR | GCAATTTGGAAGTCATCCATCCACGATTGCTGTCGATTCACCTAATTGGG | [1497] |
| fibrinflatum_ME_AR | GCAATTTGGAAGTCATTCATCCACGATTGCTGTCGATTCACCTAATTGGG | [1497] |
| fibrinflatum_GA_FR | GCAATTTGGAAGTCATYCATCCACGATTGCTGTCKATTCACCTGATTGGG | [1497] |
| haysi_AL_BCC3 | GCAACTTGGAAGTCATCCATCCGCGATTGCTGTCGATTCACCTGATTGGG | [1497] |
| haysi_TX_SJR | GCAACTTGGAAGTCATCCATCCKCGATTGCTGTCGATTCACCTGATTGGG | [1497] |
| infenestrum_NC_RR | GCAATTTGGARGTCATYCATCCSCGATTGCTGTCRATTCACCTGATTGGG | [1497] |

Appendix 1. (Cont.)

| Taxa | Sequence | Base # |
|---|---|---|
| infenestrum_SC_RBC | GSAATTTGGAAGTCATCCATCCRCGATTGCTGTCGATTCACCTGATTGGG | [1497] |
| jenningsi_TN_PR | GCAATTTGGAAGTCATCCATCCACGATTGCTGTCGATTCACCTGATTGGG | [1497] |
| jenningsi_NC_ER | GCAAWTTGGAAGTCATCCATCCACGATTGCTGTCGATTCACCTGAWTGGG | [1497] |
| jenningsi_SC_FC | GCAATTTGGAAGTCATCCATCCACGATTGCTGTCGATTCACCTGATTGGG | [1497] |
| jenningsi_PA_BR | GCAATTTGGAAGTCATCCATCCACGATTGCTGTCGATTCACCTGATTGGG | [1497] |
| jenningsi_GA_AR | GTAATTTGGAAGTCATCCATCCCCGATTGCTGTCGATTCACCTGATTGGG | [1497] |
| jonesi_FL_CC1 | GCAATTTGGAAGTCATCCATCCGCGATTACTGTCGATTCACCTGATTGGG | [1497] |
| jonesi_AL_BCC | GCAATTTGGAAGTCATCCATCCGCGATTRCTGTCGATTCACCTGATTGGG | [1497] |
| jonesi_NC_CC | GCAATTTGGAAGTCATCCATCCGCGATTACTGTCGATTCACCTGATTGGG | [1497] |
| jonesi_NC_QC | GCAATTTGGAAGTCATCCATCCGCGATTACTGTCGATTCACCTGATTGGG | [1497] |
| jonesi_GA_WC | GCAATTTGGAAGTCATCCATCCGCGATTACTGTCGATTCACCTGATTGGG | [1497] |
| krebsorum_NC_MC | GCAATTTGGAAGTCATCCATCCGCGATTGCTGTCGATTCACCTGATTGGA | [1497] |
| krebsorum_SC_CC2 | GCAATTTGGAAGTCATCCATCCGCGATTGCTGTCGATTCACCTGATTGGA | [1497] |
| lakei_PA_NC | GCAATTTGGAAGTCATCCATCCGCGATTGCTGTCGATTCACCTGATTGGG | [1497] |
| lakei_SC_BR | GCAATTTGGAAGTCATCCATCCGCGATTGCTGTCGATTCACCTGATTGGG | [1497] |
| lakei_FL_CR | GCAATTTGGAAGTCATCCATCCGCGATTGCTGTCGATTCACCTGATTGGG | [1497] |
| lakei_Taunt_8_MA_TR | GCAATTTGGAAGTCATCCATCCGCGATTGCTGTCGATTCACYTGATTGGG | [1497] |
| lakei_Taunt_9_MA_TR | GCAATTTGGAAGTCATCCATCCGCGATTGCTGTCGATTCACTTGATTGGG | [1497] |
| luggeri_NWT | GCAATTTGGAAGTCATTCATCCRCGATTGCTGTCGATTCACTTGATTGGG | [1497] |
| luggeri_NE_FR | GCAATTTGGAAGTCATTCATCCACGATTGCTGTCGATTCACTTGATTGGG | [1497] |
| luggeri_NC_HR | GCAATTTGGAAGTCATTCATCCGCGATTGCTGTCGATTCACTTGATTGGG | [1497] |
| luggeri_KY_GR3 | GCAATTTGGAAGTCATTCATCCACGATTGCTGTCGATTCATTTGATTGGG | [1497] |
| 'notiale AL BC5+6' | GCAATTTGGAAGTCATTCATCCACGATTGCTGTCGATTCACCTAATTGGG | [1497] |
| notiale_VA_RR | GCAATTTGGAAGTCATCCATCCACGATTGCTGTCGATTCACCTAATTGGG | [1497] |
| notiale_TN_CC | GCAATTTGGAAGTCATTCATCCACGATTGCTGTCGATTCACCTAATTGGG | [1497] |
| notiale_SC_RBC | GYAATTTGGAAGTCATYCATCCACGATTGCTGTCGATTCACCTAATTGGG | [1497] |
| 'notiale AL BC6+6' | GCAATTTGGAAGTCATTCATCCACGATTGCTGTCGATTCACCTAATTGGG | [1497] |
| nyssa_AL_BC | GCAATTTGGAAGTCATCCATCCGCGATTGCTGTCAATTCACCTAATTGGG | [1497] |
| nyssa_ME_AR | GCAATTTGGAAGTCATCCATCCGCGATTGCTGTCAATTCACTTAATTGGG | [1497] |
| nyssa_VA_RR | GCAATTTGGAAGTCATCCATCCGCGATTGCTGTCAATTCACYTAATTGGG | [1497] |
| nyssa_ME_PR | GCAATTTGGAAGTCATCCATCCGCGATTGCTGTCAATTCACCTAATTGGG | [1497] |
| nyssa_NC_TR | GCAATTTGGAAGTCATCCATCCGCGATTGCTGTCAATTCACCTAAATGGG | [1497] |
| ozarkense_MO_GR2 | GCAATTTGGAAGTCATCCATCCRCGATTGCTGTCGATTCACCTGATTGGA | [1497] |
| ozarkense_MO_GR1 | GCAATTTGGAAGTCATCCATCCACGACTGCTGTCGATTCACCTGATTGGA | [1497] |
| penobsco_ME_PR1 | GCAATTTGGAAGTCATCCATCCGCGATTGCTGTCAATTCACTTGATAGGG | [1497] |
| penobsco_ME_PR2 | GCAATTTGGAAGTCATCCATCCGCGATTGCTGTCGATTCACCTGATTGGG | [1497] |
| podostemi_NC_TR | GCAATTTAGAAGTCATTCATCCACGATTGCTGTCAATTCACCTGATTGGG | [1497] |
| podostemi_GA_AS | GCAATTTAGAAGTCATTCATCCACGATTGCTGTCAATTCACCTGATTGGG | [1497] |
| podostemi_MS_BC | GCAATTTAGAAGTCATTCATCCACGATTGCTGTCAATTCACCTGATTGGG | [1497] |
| podostemi_GA_CR | GCAATTTAGAAGTCATTCATCCACGATTGCTGTCAATTCACCTGATTGGG | [1497] |
| remissum_NC_NR2 | GCAATTTGGAAGTCATCCATCCGCGATTGCTGTCAATTCACCTGATAGGG | [1497] |
| remissum_NC_NR1 | GCAATTTGGAAGTCATCCATCCGCGATTACTGTCGATTCACCTGATTGGG | [1497] |
| remissum_NC_NR3 | GCAATTTGGAAGTYATCCATCCGCGATTACTGTCGATTCACCTGATTGGG | [1497] |
| 'snowi AL BC 4+6' | GCAATTTGGAAGTCATTCATCCACGATTGCTGTCGATTCACCTAATTGGG | [1497] |
| snowi_TN_CC | GCAATTTGGAAGTCATTCATCCACGATTGCTGTCRATTCACCTAATTGGG | [1497] |
| 'snowi AL BC 4+4' | GCAATTTGGAAGTCATTCATCCACGATTGCTGTCGATTCACCTAATTGGG | [1497] |
| taxodium_GA_CC2 | GCAATTTGGAAGTCATCCATCCGCGATTGCTGTCGATTCACCTGATTGGG | [1497] |
| taxodium_FL_CR | GCAATTTGGAAGTCATCCATCCGCGATTGCTGTCGATTCACCTGATTGGG | [1497] |
| underhilli_AL_HC3 | GCAATTTGGAAGTCATCCATCCRCGATTGCTGTCGATTCACCTRATTGGG | [1497] |
| underhilli_GA_FR | GCAATTTGGAAGTCATCCATCCACGATTGCTGTCGATTCACCTGATTGGG | [1497] |
| underhilli_GA_FS | GCAATTTGGAAGTCATCCATCCACGATTGCTGTCGATTCACCTGATTGGG | [1497] |

| | | |
|---|---|---|
| tuberosum | GACTTTCTGGACGCCCGAAAGTATTGGCYGGCYTTCGATCTGCTGCGCAA | [1550] |
| verecundum | GACTTCCTAGACGATCGAAAGTATTGGCAGGCTTTTGATCTGTTGCGCAA | [1384] |
| decimatum | -------------------------------------------------- | [1218] |
| apricarium | GACTTCCTAGACGCCCGAAAGTATTGGCTGGCTTTCGATCTGCTGCGCAA | [1547] |
| reptans | GACTTCCTAGACGCCCGAAAGTATTGGCCGGCTTTTGATCTGTTGCGCAA | [1547] |
| anchist_AL_HC | GACTTCCTAGACGCCCGAAAGTATTGGCTGGCTTTTGATCTGATGCGCAA | [1547] |
| anchist_DE_DR | GACTTCCTAGACGCCCGAAAGTATTGGYTGGCTTTCGATCTGATGCGCAA | [1547] |
| anchist_ME_AR | GACTTCCTAGACGCCCGAAAGTATTGGTTGGCTTTCGATCTGATGCGCAA | [1547] |

Appendix 1. (Cont.)

| Taxa | Sequence | Base # |
|---|---|---|
| anchist_NC_NR | GACTTCCTRGACGCCCGAAAGTATTGGCTGGCTTTCGATCTGATGCGCAA | [1547] |
| anchist_ME_KR | GACTTCCTAGACGCCCGAAAGTATTGGCTGGCTTTYGATCTGATGCGCAA | [1547] |
| aranti_GA_FS | GACTTTCTAGACGCCCGAAAGTATTGGATGGCTTTTGATCTGATGCGCAA | [1547] |
| aranti_GA_AS | GACTTTCTAGACGCCCGAAAGTATTGGATGGCTTTTGATCTGATGCGCAA | [1547] |
| aranti_AL_HC | GACTTTCTAGACGCCCGAAAGTATTGGATGGCTTTTGATCTGATGCGCAA | [1547] |
| aranti_SC_LR | GACTTTCTAGACGCCCGAAAGTATTGGATGGCTTTTGATCTGATGCGCAA | [1547] |
| chlorum_NC_GC3 | GACTTCCTAGATGCCCGAAAGTATTGGTTGGCTTTCGATCTGATGCGCAA | [1547] |
| chlorum_NC_GC1 | GACTTCCTAGATGCCCGAAAGTATTGGCTGGCTTTTGATCTGATGCGCAA | [1547] |
| chlorum_NC_GC4 | GACTTCCTAGATGCCCGMAAGTATTGGCTGGCTTTYGATCTGATGCGMAA | [1547] |
| confusum_TN_LR | GACTTCCTAGACGCCCGAAAGTATTGGCTGGCTTTTGATCTGATGCGAAA | [1547] |
| confusum_GA_GC | GACTTCCTAGACGCCCGAAAGTATTGGCTGGCTTTTGATCTGATGCGAAA | [1547] |
| confusum_GA_EC | GACTTCCTAGAYGCCCGAAAGTATTGGCTGGCTTTTGATCTGATGCGAAA | [1547] |
| confusum_TX_SJR | GACTTCCTAGAYGCCCGAAAGTATTGGCTGGCTTTTGATCTGATGCGMAA | [1547] |
| confusum_TX_SR | GACTTCCTGGACGCCCGAAAGTATTGGCTGGCTTTCGATCTGATGCGGAA | [1547] |
| confusum_TX_Bayou | GACTTCCTRGATGCCCGAAAGTATTGGCTGGCTTTTGATCTGATGCGTAA | [1547] |
| definitum_PA_LC | GACTTCCTAGACGCCCGAAAGTATTGGCTGGCTTTCGATCTGATGCGGAA | [1547] |
| definitum_SC_GC | GACTTCCTAGACGCCCGAAAGTATTGGCTGGCTTTCGATCTGATGMGGAA | [1547] |
| dixiense_GA_WC | GACTTCCTGGATGCCCGAAAGTATTGGCTGGCTTTTGATCTGATGCGCAA | [1547] |
| dixiense_SC_LBC | GACTTCCTGGATGCCCGAAAGTATTGGCTGGCTTTTGATCTGATGCGCAA | [1547] |
| dixiense_NC_QC | GACTTCCTGGATGCCCGAAAGTATTGGCTGGCTTTTGATCTGATGCGCAA | [1547] |
| dixiense_FL_CC | GACTTCCTGGATGCCCGAAAGTATTGGCTGGCTTTTGATCTGATGCGCAA | [1547] |
| fibrinflatum_PA_DR | GACTTCYTAGACGCTCGAAAGTATTGGATGGCTTTTGATCTGATGCGCAA | [1547] |
| fibrinflatum_ME_AR | GACTTCCTAGACGCTCGAAAATATTGGCTGGCTTTCGATCTGATGCGCAA | [1547] |
| fibrinflatum_GA_FR | GACTTCCTAGACGCTCGAAAGTATTGGATGGCTTTCGATCTGATGCGCAA | [1547] |
| haysi_AL_BCC3 | GACTTCCTAGACGCCCGAAAGTATTGGCAGGCTTTTGATTTGATGCGCAA | [1547] |
| haysi_TX_SJR | GACTTCCTAGACGCCCGAAAGTATTGGCAGGCTTTTGATTTGATGCGCAA | [1547] |
| infenestrum_NC_RR | GACTTYCTAGACGCCCGAMARTATTGGCTGGCTTTYGATCTGATGCGCAA | [1547] |
| infenestrum_SC_RBC | GACTTCCTAGACGCCCGAAAGTATTGGCTGGCTTTCGATCTGATGCGCAA | [1547] |
| jenningsi_TN_PR | GACTTCCTAGACGCCCGAAAGTATTGGCTGGCTTTTGATCTGATGCGCAA | [1547] |
| jenningsi_NC_ER | GACTTCCTAGACGCCCGACAGTATTGGCTGGCTTTTGATCTRATGCGCAA | [1547] |
| jenningsi_SC_FC | GACTTYCTAGAYGCCCGAAAGTATTGGTTGGCTTTTGATCTGATGCGCAA | [1547] |
| jenningsi_PA_BR | GACTTCCTAGACGCCCGAAAGTATTGGTTGGCTTTTGATCTGATGCGCAA | [1547] |
| jenningsi_GA_AR | GACTTCCTAGATGCCCGAAAGTATTGGTTGGCTTTTGATCTGATGCGCAA | [1547] |
| jonesi_FL_CC1 | GACTTCCTAGACGCCCGAAAGTATTGGCTGGCTTTCGATCTGATGCGGAA | [1547] |
| jonesi_AL_BCC | GAYTTCCTAGACGCCCGAAAGTATTGGCTGGCTTTCGATCTGATGCGAAA | [1547] |
| jonesi_NC_CC | GACTTCCTAGACGCCCGAAAGTATTGGCTGGCTTTCGATCTGATGCGGAA | [1547] |
| jonesi_NC_QC | GACTTCCTAGACGCCCGAAAGTATTGGCTGGCTTTCGATCTGATGCGGAA | [1547] |
| jonesi_GA_WC | GACTTCCTAGACGCCCGAAAGTATTGGCTGGCTTTTGATTTGATGCGCAA | [1547] |
| krebsorum_NC_MC | GACTTTCTAGACGCCCGAAAGTATTGGTTGGCTTTTGATCTGATGCGCAA | [1547] |
| krebsorum_SC_CC2 | GACTTTCTAGACGCCCGAAAGTATTGGTTGGCTTTTGATCTGATGCGCAA | [1547] |
| lakei_PA_NC | GACTTCCTAGATGCCCGAAAGTATTGGCTGGCTTTTGATTTGATGCGCAA | [1547] |
| lakei_SC_BR | GACTTCCTAGATGCCCGAAAGTATTGGCTGGCTTTCGATCTGATGCGCAA | [1547] |
| lakei_FL_CR | GACTTCCTAGACGCCCGAAAGTATTGGCTGGCTTTTGATCTGATGCGCAA | [1547] |
| lakei_Taunt_8_MA_TR | GACTTCCTAKAYGCCCGAAAGTATTGGCTGGCTTTCGATCTGATGCGCAA | [1547] |
| lakei_Taunt_9_MA_TR | GACTTCCTATATGCCCGAAAGTATTGGCTGGCTTTTGATCTGATGCGMAA | [1547] |
| luggeri_NWT | CACTTCCTAGACGCCCGAAAGTATTGGCTGGCYTTTGATCTGATGCGCAA | [1547] |
| luggeri_NE_FR | CACTTCCTAGACGCCCGAAAGTATTGGCTGGCTTTTGATCTGATGCGCAA | [1547] |
| luggeri_NC_HR | GACTTCCTAGACGCCCGAAAGTATTGGCTGGCTTTTGATCTGATGCGCAA | [1547] |
| luggeri_KY_GR3 | GACTTCCTAGACGCCCGAAAGTATTGGCTGGCTTTCGATCTGATGCGCAA | [1547] |
| 'notiale AL BC5+6' | GACTTCCTAGACGCCCGAAAGTATTGGATGGCTTTTGATCTRATGCGCAA | [1547] |
| notiale_VA_RR | GACTTCCTAGACGCTCGAAAGTATTGGMCGGCTTTCGATCTGATGCGCAA | [1547] |
| notiale_TN_CC | GACTTCCTAGACGCTCGAAAGTATTGGCTGGCATTCGATCTGATGCGCAA | [1547] |
| notiale_SC_RBC | GACTTCCTAGACGCYCGAAARTATTGGCTGGCTTTYGATYTGATGCGCAA | [1547] |
| 'notiale AL BC6+6' | GACTTCCTAGACGCCCGAAAGTATTGGCTGGCATTCGATCTGATGCGCAA | [1547] |
| nyssa_AL_BC | GACTTCCTAGACGCCCGAAAGTATTGGCTGGCTTTCGATCTGATGCGCAA | [1547] |

| | | |
|---|---|---|
| nyssa_ME_AR | GACTTCCTAGACGCCCGAAAGTATTGGCTGGCTTTCGATCTGATGCGCAA | [1547] |
| nyssa_VA_RR | GACKTCCTAGACGCCCGAAAGTATTGGCTGGCTTTCGATCTGATGCGCAA | [1547] |
| nyssa_ME_PR | GACTTCCTAGACGCCCGAAAGTATTGGCTGGCTTTCGATCTGATGCGCAA | [1547] |
| nyssa_NC_TR | GACTTCCTAGACGCCCGAAAGTATTGGCTGGCTTTCGATCTGATGCGCAA | [1547] |
| ozarkense_MO_GR2 | GACTTCCTAGACGCCCGAAAGTATTGGCAGGCTTTTGATCTGATGCGCAA | [1547] |
| ozarkense_MO_GR1 | GACTTCCTAGACGCCCGAAAGTATTGGCAGGCTTTTGATCTGATGCGCAA | [1547] |
| penobsco_ME_PR1 | GACTTCCTAGACGCTCGAAAGTATTGGCTGGCTTTYGATCTGATGCGCAA | [1547] |

Appendix 1. (Cont.)

| Taxa | Sequence | Base # |
|---|---|---|
| penobsco_ME_PR2 | GACTTCCTAGACGCCCGAMAGTATTGGCTGGCCTTTGATCTGATGCGCAA | [1547] |
| podostemi_NC_TR | GACTTCCTAGACGCCCGAAAGTATTGGCTGGCTTTCGATCTGATGCGTAA | [1547] |
| podostemi_GA_AS | GACTTCCTAGACGCCCGAAAGTATTGGCTGGCTTTCGATCTGATGCGTAA | [1547] |
| podostemi_MS_BC | GACTTCCTAGACGCCCGAAAGTATTGGCTGGCTTTCGATCTGATGCGTAA | [1547] |
| podostemi_GA_CR | GACTTCCTAGACGCCCGAAAGTATTGGCTGGCTTTCGATCTGATGCGTAA | [1547] |
| remissum_NC_NR2 | GACTTTCTAGACGCCCGAAAGTATTGGCTGGCTTTTGATCTGATGCGCAA | [1547] |
| remissum_NC_NR1 | GACTTTCTAGACGCCCGAAAGTATTGGTTGGCTTTTGATCTGATGCGCAA | [1547] |
| remissum_NC_NR3 | GACTTYCTAGACGCCCGAAAGTATTGGTTGGCTTTTGATCTGATGCGCAA | [1547] |
| 'snowi AL BC 4+6' | GACTTCCTAGACGCCCGAAAGTATTGGCTGGCATTCGATCTGATGCGCAA | [1547] |
| snowi_TN_CC | GACTTCCTAGACGCTCGAAAGTATTGGATGGCATTTGATCTGATGCGCAA | [1547] |
| 'snowi AL BC 4+4' | GACTTCCTAGACGCCCGAAAGTATTGGATGGCTTTTGATCTAATGCGCAA | [1547] |
| taxodium_GA_CC2 | GACTTCCTAGAYGCCCGAAAGTATTGGCTGGCTTTTGATCTGATGCGCAA | [1547] |
| taxodium_FL_CR | GACTTCCTAGACGCCCGAAAGTATTGGCTGGCTTTYGATCTGATGCGCAA | [1547] |
| underhilli_AL_HC3 | GACTTCTTAGACGCTCGAAAGTATTGGATGGCTTTTGATCTGATGCGCAT | [1547] |
| underhilli_GA_FR | GACTTCCTAGACGCTCGAAAGTATTGGATGGCTTTTGATCTGATGCGCAA | [1547] |
| underhilli_GA_FS | GACTTCCTAGACGCTCGAAAGTATTGGATGGCTTTTGATCTGATGCGCAA | [1547] |
| tuberosum | ACAACGAATYAATCTGAATTTGATTGTGGATCACGACCCGAAGACATTTC | [1600] |
| verecundum | ACAACGGATTAATTTGAATTTGATCGTGGATCACGACCCAAAAACATTTT | [1434] |
| decimatum | -------------------------------------------------- | [1218] |
| apricarium | ACAACGAATCAATCTGAACTTGATCGTGGATCACGACCCAAAGACATTTT | [1597] |
| reptans | ACAACGAATCAATCTGAACTTGATCGTGGATCACGACCCAAARACATTTT | [1597] |
| anchist_AL_HC | GCAACGAATCAACCTGAATTTGATTGTGGATCACGACCCAAARACATTTT | [1597] |
| anchist_DE_DR | GCAACGAATCAACCTGAATTTGATTGTGGATCACGACCCAAAGACATTTT | [1597] |
| anchist_ME_AR | GCAACGAATCAACCTGAATTTGATTGTGGATCACGACCCAAAGACATTTT | [1597] |
| anchist_NC_NR | GCAACGAATCAACCTGAATTTGATTGTGGATCACGACCCAAARACATTTT | [1597] |
| anchist_ME_KR | GCAACGAATCAACCTGAATTTGATTGTGGATCACGACCCAAAGACATTTT | [1597] |
| aranti_GA_FS | GCAACGAATCAACCTAAATTTGATTGTGGATCATGACCCAAAGACATTTT | [1597] |
| aranti_GA_AS | GCAACGAATCAACCTAAATTTGATTGTGGATCATGACCCAAAGACATTTT | [1597] |
| aranti_AL_HC | GCAACGAATCAACCTAAATTTGATTGTGGATCATGACCCAAAGACATTTT | [1597] |
| aranti_SC_LR | GCAACGAATCAACCTAAATTTGATTGTGGATCATGACCCAAAGACATTTT | [1597] |
| chlorum_NC_GC3 | GCAACGAATCAACCTAAATTTGATTGTGGATCACGACCCAAAGACATTTT | [1597] |
| chlorum_NC_GC1 | GCAGCGAATCAACCTGAATTTGATTGTGGATCAYGACCCAAAGACATTTT | [1597] |
| chlorum_NC_GC4 | GCARCGRATCAACCTGAATTTGATTGTGGATCAYGACCCAAAGACATTTT | [1597] |
| confusum_TN_LR | GCAACGAATCAACCTAAATTTGATTGTGGATCACGACCCAAAGACATTTT | [1597] |
| confusum_GA_GC | GCAACGAATCAACCTAAATTTGATTGTGGATCACGACCCAAAGACATTTT | [1597] |
| confusum_GA_EC | GCAACGAATCAACCTRAATTTGATTGTGGATCACGACCCAAAGACATTTT | [1597] |
| confusum_TX_SJR | GCAACGRATCAACCTAAATTTGATTGTGGATCACGACCCAAAGACATTTT | [1597] |
| confusum_TX_SR | GCAACGGATCAACCTAAATTTGATTGTGGATCATGACCCAAAGACATTTT | [1597] |
| confusum_TX_Bayou | GCAACGGATCAACCTAAATTTGATTGTGGATCACGGCCCAAAGACATTTT | [1597] |
| definitum_PA_LC | GCAACGGATCAACCTGAATTTAATTGTGGATCATGACCCAAAGACATTTT | [1597] |
| definitum_SC_GC | GCAACGGATCAACCTGAATTTAATTGTGGATCATGACCCAAAGACATTTT | [1597] |
| dixiense_GA_WC | GCAACGAATCAATTTGAATTTGATTGTGGATCACGACCCAAAGACATTTT | [1597] |
| dixiense_SC_LBC | GCAACGAATCAATTTGAATTTGATTGTGGATCACGACCCAAAGACATTTT | [1597] |
| dixiense_NC_QC | GCAACGAATCAATTTGAATTTGATTGTGGATCACGACCCAAAGACATTTT | [1597] |
| dixiense_FL_CC | GCAACGAATCAATTTGAATTTGATTGTGGATCACGACCCAAAGACATTTT | [1597] |
| fibrinflatum_PA_DR | GCAACGAATCAACCTGAATTTGATTGTGGATCACGACCCAAAGACATTTT | [1597] |
| fibrinflatum_ME_AR | GCAACGAATCAATTTGAATYTGATTGTGGATCACGATCCAAAGACATTTT | [1597] |
| fibrinflatum_GA_FR | GCAACGGATCAAYCTGAATTTGATTGTGGATCATGACCCAAAGACATTTT | [1597] |
| haysi_AL_BCC3 | GCAACGAATCAATCTGAATTTGATTGTGGATCACGACCCAAAGATATTTT | [1597] |
| haysi_TX_SJR | GCAACGAATCAATCTGAATTTGATTGKGGATCACGACCCAAAGATATTTT | [1597] |
| infenestrum_NC_RR | GCAACGAATCAATCTGAATTTGATTGTAGATCACGACCCAAAGACATTTT | [1597] |
| infenestrum_SC_RBC | GCAACGAATCAATCTGAATTTGATTGTAGATCACGACTCAAAGACATTTT | [1597] |
| jenningsi_TN_PR | GCAACGAATCAACCTGAATTTGATTGTGGATCACGACCCAAAGACATTTT | [1597] |
| jenningsi_NC_ER | GCAACGAATCAACCTGAATTTGATTGTGGACCACGACCCAAAGACATTTT | [1597] |
| jenningsi_SC_FC | GCAACGAATCAACCTGAATTTGATTGTGGACCACGACCCAAAGACATTTT | [1597] |

| | | |
|---|---|---|
| jenningsi_PA_BR | GCACCGAATCAACCTGAATTTGATTGTGGACCACGACCCAAAGACATTTT | [1597] |
| jenningsi_GA_AR | GCAACGTATCAACCTGAATTTGATTGTGGACCACGACCCAAAGACATTTT | [1597] |
| jonesi_FL_CC1 | GCAACGGATCAAYCTGAATTTGATTGTGGATCACGACCCAAAGACATTTT | [1597] |
| jonesi_AL_BCC | GCAACGAATCAACCTGAATTTGATTGTGGATCAYGACCCAAAGACATTTT | [1597] |

Appendix 1. (Cont.)

| Taxa | Sequence | Base # |
|---|---|---|
| jonesi_NC_CC | GCAACGGATCAACCTGAATTTGATTGTGGATCAYGACCCAAAGACRTTTT | [1597] |
| jonesi_NC_QC | GCAACGGATCAACCTGAATTTGATTGTGGATCAYGACCCAAAGACATTTT | [1597] |
| jonesi_GA_WC | GCAACGAATCAACCTGAATTTGATTGTGGATCACGACCCAAAGACATTTT | [1597] |
| krebsorum_NC_MC | GCAACGAATCAATTTGAATTTGATTGTGGATCACGACCCAAAGACATTTT | [1597] |
| krebsorum_SC_CC2 | GCAACGAATCAATTTGAATTTGATTGTGGATCACGACCCAAAGACATTTT | [1597] |
| lakei_PA_NC | GCAACGAATCAACCTAAATTTGATTGTGGATCACGACCCAAAGACATTTT | [1597] |
| lakei_SC_BR | GCAACGAATCAACCTAAATTTGATTGTGGATCACGACCCAAAGACATTTT | [1597] |
| lakei_FL_CR | GCARCGAATCAACCTRAATTTGATTGTGGATCACGACCCAAAGACATTTT | [1597] |
| lakei_Taunt_8_MA_TR | GCAACGAATCAACCTAAATTTGATTGTGGATCACGACCCRAAGACATTTT | [1597] |
| lakei_Taunt_9_MA_TR | GCAACGAATCAACCTAAATTTGATTGTGGATCACGACCCRAAGACATTTT | [1597] |
| luggeri_NWT | GCAACGAATCAATCTGAACTTGATTGTGGACCACGATCCAAAGACATTTT | [1597] |
| luggeri_NE_FR | GCAACGAATCAATCTAAACTTGATTGTGGACCACGATCCAAAGACATTTT | [1597] |
| luggeri_NC_HR | GCAACGAATCAATCTGAACTTGATTGTGGACCACGATCCAAAGACATTTT | [1597] |
| luggeri_KY_GR3 | GCAACGAATCAATCTGAACTTGATTGTTGACCACGACCCAAAGACATTTT | [1597] |
| 'notiale AL BC5+6' | GCAACGAATCAATTTGAATTTGATTGTGGATCATGACCCAAAGACATTTT | [1597] |
| notiale_VA_RR | GCAACGAATCAATTTGAATTTGATTGTGGATCATGACCCAAAGACATTTT | [1597] |
| notiale_TN_CC | GCAACGAATCAATTTGAATTTGATTGTGGATCAYGATCCAAAGACATTTT | [1597] |
| notiale_SC_RBC | GCAACGAATCAAYYTGAATTTGATTGTGGATCACRATCCAAAGACATTTT | [1597] |
| 'notiale AL BC6+6' | GCAACGAATCAATTTGAATTTGATTGTGGATCATGACCCAAAGACATTTT | [1597] |
| nyssa_AL_BC | GCAACGAATCAACCTGAATTTGATTGTGGATCACGACCCAAAGACATTTT | [1597] |
| nyssa_ME_AR | GCAACGAATCAACCTGAATTTGATTGTGGATCACGACCCAAAGACATTTT | [1597] |
| nyssa_VA_RR | GCAACGAATCAACCTGAATTTGATTGTGGATCATGACCCAAAGACATTTT | [1597] |
| nyssa_ME_PR | GCAACGAATCAACCTGAATTTGATTGTGGATCACGACCCAAAGACATTTT | [1597] |
| nyssa_NC_TR | GCAACGAATCAACCTGAATCTGATTGTGGATCACGACCCAAAGACATTTT | [1597] |
| ozarkense_MO_GR2 | GCAACGAATCAATCTGAATTTGATTGTGGATCATGACCCAAATACATTTT | [1597] |
| ozarkense_MO_GR1 | GCAACGAATCAATCTGAAATTGATTGTGGATCATGACCCAAAGACATTTT | [1597] |
| penobsco_ME_PR1 | GCAACGAATCAATCTGAATTTGATTGTAGATCACGACCCAAAGACATTTT | [1597] |
| penobsco_ME_PR2 | GCAACGAATCAACCTGAATTTGATTGTAGATCACGACCCAAAGACATTTT | [1597] |
| podostemi_NC_TR | GCAACGAATCAACCTGAATTTGATTGTGGATCACGACCCAAAGACATTTT | [1597] |
| podostemi_GA_AS | GCAACGAATCAACCTGAATTTGATTGTGGATCACGACCCAAAGACATTTT | [1597] |
| podostemi_MS_BC | GCAACGAATCAACCTGAATTTGATTGTGGATCACGACCCAAAGACATTTT | [1597] |
| podostemi_GA_CR | GCAACGAATCAACCTGAATTTGATTGTGGATCACGACCCAAAGACATTTT | [1597] |
| remissum_NC_NR2 | GCAACGAATCAATCTGAATTTGATTGTAGATCACGACCCAAAGACATATT | [1597] |
| remissum_NC_NR1 | GCAACGAATCAATCTGAATTTGATTGTAGATCACGACCCAAAGACATTTT | [1597] |
| remissum_NC_NR3 | GCAACGAATCAATCTGAATTTGATTGTRGATCACGACCCAAAGACATTTT | [1597] |
| 'snowi AL BC 4+6' | GCAACGAATCAATTTGAATTTGATTGTGGATCATGACCCAAAGACATTTT | [1597] |
| snowi_TN_CC | GCAACGAATCAATTTGAATTTGATTGTGGATCATGATCCAAAGACATTTT | [1597] |
| 'snowi AL BC 4+4' | GCAACGAATCAATTTGAATTTGATTGTGGATCATGACCCAAAGACATTTT | [1597] |
| taxodium_GA_CC2 | GCAGCGAATCAACCTRAATTTGATTGTGGATCAYGACCCAAAGACATTTT | [1597] |
| taxodium_FL_CR | GCAACGAATCAACCTRAATTTGATTGTGGATCAYGACCCAAAGACATTTT | [1597] |
| underhilli_AL_HC3 | GCAACGAATCAACCTGAATTTGATTGTGGATCACGACCCAAAGACATTTT | [1597] |
| underhilli_GA_FR | GCAACGAATCAACCTGAATTTGATTGTGGATCAYGACCCAAAGACATTTT | [1597] |
| underhilli_GA_FS | GCAACGAATCAACCTGAATTTGATTGTGGATCATGACCCAAAGACATTTT | [1597] |

| | | |
|---|---|---|
| tuberosum | TGGAGAATCTGGACGAGTTTGTCGGTCAGATTTCGAATCCACAGTGGCTG | [1650] |
| verecundum | TGGAGAATCTCGACGAGTTTGTCAGGCAGATTTCAAATCCGCAATGGCTG | [1484] |
| decimatum | ---------- | [1218] |
| apricarium | TGGAGAATCTGGACGAGTTTGTGAATCAGATCACAAATCCGCAATGGCTG | [1647] |
| reptans | TGGAGAATCTGGACGAGTTTGTGAGTCAGATTTCGAATCCACAGTGGCTG | [1647] |
| anchist_AL_HC | TGGAGAATCTGGACGAATTTGTGAGCCAGATTTCGAATCCACAATGGTTG | [1647] |
| anchist_DE_DR | TRGAGAATCTGGACGAATTTGTGAGCCAGATTTYGAATCCACAATGGTTG | [1647] |
| anchist_ME_AR | TGGAGAATCTGGACGAATTTGTGAGCCAGATTTCGAATCCACAATGGTTG | [1647] |
| anchist_NC_NR | TGGAGAATCTGGACGAATTTGTGAGCCAGATTTCGAATCCACAATGGTTG | [1647] |
| anchist_ME_KR | TGGAGAATCTGGACGAATTTGTGAGCCAGATTTCGAATCCACAATGGTTR | [1647] |
| aranti_GA_FS | TAGAGAATCTGGACGAATTTGTGAGCCAGATTTCGAATCCACAATGGTTG | [1647] |
| aranti_GA_AS | TAGAGAATYTGGACGAATTTGTGAGCCAGATTTCGAATCCACAATGGTTG | [1647] |
| aranti_AL_HC | TAGAGAATCTGGACGAATTTGTGAGCCAARTTTCAAATCCACAATGGTTG | [1647] |
| aranti_SC_LR | TAGAGAATCTGGACGAATTTGTGAGCCAAGTTTCAAATCCACAATGGTTG | [1647] |
| chlorum_NC_GC3 | TGGAGAATCTGGACGAATTTGTGAGCCAGATTTCGAATCCACAATGGTTG | [1647] |

| | | |
|---|---|---|
| chlorum_NC_GC1 | TGGAGAATCTAGAYGAATTTGTGAGCCAGATTTCGAATYCACAATGGTTG | [1647] |

Appendix 1. (Cont.)

| Taxa | Sequence | Base # |
|---|---|---|
| chlorum_NC_GC4 | TRGAGAATCTGGACGARTTCGTGARCCAGATTTCGAATCCACAATGGTTG | [1647] |
| confusum_TN_LR | TGGAGAATCTGGACGAATTCGTGAGCCAGATTTCGAATCCACAATGGTTG | [1647] |
| confusum_GA_GC | TGGAGAATCTGGACGAATTCGTGAGCCAGATTTCGAATCCACAATGGTTG | [1647] |
| confusum_GA_EC | TGGAGAATCTGGACGAATTCGTGAGCCAGATTTCGAATCCACAATGGTTG | [1647] |
| confusum_TX_SJR | TGGAGAATCTRGAYGAATTCGTGAGCCAGATTTCGAATCCACAATGGTTG | [1647] |
| confusum_TX_SR | TGGAAAATCTAGATGAATTTGTGAGCCAGATTTTGAATCCACAATGGTTG | [1647] |
| confusum_TX_Bayou | TGGAGAATCTGGACGAATTTGTGAGCCAGATTTCGAATCCACAATGGTTG | [1647] |
| definitum_PA_LC | TAGAGAATCTGGACGAATTTGTGAGCCAGATTTCGAATCCACAATGGTTG | [1647] |
| definitum_SC_GC | TAGAGAATCTGGACGAATTTGTGAGCCAGATTTCGAATCCACAATGGTTG | [1647] |
| dixiense_GA_WC | TGGAGAATCTGGACGAATTTGTGAGCCAGATTTCGAATCCACAATGGTTG | [1647] |
| dixiense_SC_LBC | TGGAGAATCTGGACGAMTTTGTGAGCCAGATTTCGAATCCACAATGGTTG | [1647] |
| dixiense_NC_QC | TGGAGAATCTGGACGAATTTGTGAGCCAGATTTCGAATCCACAATGGTTG | [1647] |
| dixiense_FL_CC | TGGAGAATCTGGACGAATTTGTGAGCCAGATTTCGAATCCACAATGGTTG | [1647] |
| fibrinflatum_PA_DR | TGGAGAATCTAGACGAATTTGTGAGCCAGATTTCGAATCCACAATGGTTG | [1647] |
| fibrinflatum_ME_AR | TGGAGAATCTGGACGAATTTATGAGCCAGATTTCGAATCCACAATGGTTG | [1647] |
| fibrinflatum_GA_FR | TGGAAAGTCTGGACGAATTTGTGAGCCAGATTTCGAATCCACAATGGTTG | [1647] |
| haysi_AL_BCC3 | TGGAGAATCTGGACGAATTTGTGAGCCAGATTTCGAATCCACAATGGTTG | [1647] |
| haysi_TX_SJR | TGGAGAATCTGGACGAATTTGTGAGCCAGATTTCGAATCCACAATGGTTG | [1647] |
| infenestrum_NC_RR | TGGAGAATCTGGACGAATTTGTGAGCCAGATTTCGAATCCACAATGGTTG | [1647] |
| infenestrum_SC_RBC | TGGAGAATCTAGACGAATTTGTGAGYCAGATTTCGAATCCACAATGGTTG | [1647] |
| jenningsi_TN_PR | TAGAGCATCTGGACGAATTTGTGAGCCAGATTTCGAATCCACAATGGTTG | [1647] |
| jenningsi_NC_ER | TGGAGAATCTGGACGAATTTGTGAGCCAGATTTCGAATCCACAATGGTTG | [1647] |
| jenningsi_SC_FC | TGGAGAATYTRGACGAATTTGTGARCCAGATTTCGAATCCACAATGGTTG | [1647] |
| jenningsi_PA_BR | TGGAGAATTTGGACGAATTTATGAGCCAGATTTCGAATCCACAATGGTTG | [1647] |
| jenningsi_GA_AR | TGGAGAATCTGGACGAATTTGTGAGCCAGATTTCGAATCCACAATGGTTG | [1647] |
| jonesi_FL_CC1 | TGGAGAATCTGGACGAATTTGTGAGCCAGATTTCGAATCCACAATGGTTG | [1647] |
| jonesi_AL_BCC | TAGAGAATCTGGACGAATTCGTGAGCCAGATTTCGAATCCACAATGGTTG | [1647] |
| jonesi_NC_CC | TGGAAAATCTAGATGAATTTGTGAGCCAGATTTCGAATCCACAATGGTTG | [1647] |
| jonesi_NC_QC | TGGAAAATCTAGATGAATTTGTGAGCCAGATTTCGAATCCACAATGGTTR | [1647] |
| jonesi_GA_WC | TGGAAAATCTAGATGAATTTGTGAGCCAGATTTCGAATCCACAATGGTTG | [1647] |
| krebsorum_NC_MC | TGGAGAATCTAGATGAATTTGTGAGCCAGATTTCGAATCCACAATGGTTG | [1647] |
| krebsorum_SC_CC2 | TGGAGAATCTAGATGAATTTGTGAGCCAGATTTCGAATCCACAATGGTTG | [1647] |
| lakei_PA_NC | TGGAGAATCTGGACGAATTTGTGAGCCAGATTTCGAATCCACAATGGTTG | [1647] |
| lakei_SC_BR | TAGAGAATCTGGACGAATTTGTGAGCCAGATTTCGAATCCACAATGTTTG | [1647] |
| lakei_FL_CR | TRGAGAATCTGGACGAATTNGTGAGCCAGATTTCGAATCCACAATGGTTG | [1647] |
| lakei_Taunt_8_MA_TR | TRGAGAATCTGGACGAATTTGTGAGCCAGATTTCGAATCCACAATGGTTG | [1647] |
| lakei_Taunt_9_MA_TR | TRGAGAATCTGGACGAATTTGTGAGCCAGATTTCGAATCCACAATGGTTG | [1647] |
| luggeri_NWT | TGGAGAATCTGGACGAATTTGTGAGCCAGATTTCGAATCCACAATGGTTG | [1647] |
| luggeri_NE_FR | TGGAGAATYTGGACGAATTTGTGAGCCAGATTTCGAATCCACAATGGTTG | [1647] |
| luggeri_NC_HR | TGGAGAATCTGGACGAATTTGTGAACCAGATTTCGAATCCACAATGGTTG | [1647] |
| luggeri_KY_GR3 | TGGAGAATCTGGACGAATTTGTGAGCCAGATTTCGAATCCACAATGGTTG | [1647] |
| 'notiale AL BC5+6' | TGGAGAATTTGGACGAATTTGTGAGCCAGATTTCGAATCCACAATGGTTG | [1647] |
| notiale_VA_RR | TGGAGAATTTGGACGAATTTGTGAGCCAGATTTCGAATCCACAATGGTTG | [1647] |
| notiale_TN_CC | TGGAGAATCTGGACGAATTTGTGAGCCAGATTTCGAATCCACAATGGTTG | [1647] |
| notiale_SC_RBC | TGGARAKTCTGGACGAATTTGTGAGCCAGATTTYGAATCCACAATGGTTG | [1647] |
| 'notiale AL BC6+6' | TGGAGAATTTGGACGAATTTGTGAGCCAGATTTCGAATCCACAATGGTTG | [1647] |
| nyssa_AL_BC | TGGAGAATTTGGACGAATTTGTGAGCCAGATTTCGAATCCACAATGGTTG | [1647] |
| nyssa_ME_AR | TGGAGAATCTGGACGAATTTGTGAGCCAGATTTCGAATCCACAATGGTTG | [1647] |
| nyssa_VA_RR | TGGAGAATCTGGACGAATTTGTGAGCCAGATTTCGAATCCACAATGGTTG | [1647] |
| nyssa_ME_PR | TGGAGAATCTGGACGAATTTGTGAGCCAGATTTCGAATCCACAATGGTTG | [1647] |
| nyssa_NC_TR | TGGAGAATCTGGACGAATTTGTGAGCCAGATTTCGAATCCACAATGGTTG | [1647] |
| ozarkense_MO_GR2 | TGGAGAATCTGGATGAATTTGTGAGCCAKATTTCGAATCCACAATGGTTG | [1647] |
| ozarkense_MO_GR1 | TGGAGAATCTGGACGAAYTTGTGAGCCAKATTTCGAATCCACAATGGTTG | [1647] |
| penobsco_ME_PR1 | TGGAGAATCTGGACGAATTTGTGAGCCAGATTTCGAATCCACAATGGTTG | [1647] |
| penobsco_ME_PR2 | TGGAGAATCTGGACGAATTTGTGAGTCAGATTTCGAATCCACAATGGTTG | [1647] |
| podostemi_NC_TR | TGGAGAATCTGGACGAATTTGTGAGCCAGATTTCGAATCCACAATGGTTG | [1647] |
| podostemi_GA_AS | TGGAGAATCTGGACGAATTTGTGAGCCAGATTTCGAATCCACAATGGTTG | [1647] |
| podostemi_MS_BC | TGGAGAATCTGGACGAATTTGTGAGCCAGATTTCGAATCCACAATGGTTG | [1647] |
| podostemi_GA_CR | TGGAGAATCTGGACGAATTTGTGAGCCAGATTTCGAATCCACAATGGTTG | [1647] |
| remissum_NC_NR2 | TGGAGAATCTGGACGAATTTGTGACCCAAATTTCGAATCCACAATGGTTG | [1647] |
| remissum_NC_NR1 | TGGAGAATCTGGACGAATTTGTGAGCCAGATTTCGAATCCACAATGGTTG | [1647] |
| remissum_NC_NR3 | TGGAGAATCTGGACGAATTTGTGASCCARATTTCGAATCCACAATGGTTG | [1647] |

Appendix 1. (Cont.)

| Taxa | Sequence | Base # |
|---|---|---|
| 'snowi AL BC 4+6' | TGGAGAATTTGGACGAATTTGTGAGCCAGATTTCGAATCCACAATGGTTG | [1647] |
| snowi_TN_CC | TGGAGAATCTGGACGAATTTGTGAGCCAGATTTCGAATCCACAATGGTTG | [1647] |
| 'snowi AL BC 4+4' | TGGAGAATTTGGACGAATTTGTGAGCCAAATTTCGAATCCACAATGGTTG | [1647] |
| taxodium_GA_CC2 | TAGAGAATCTGGACGAATTYGTGAGCCAGATTTCGAATCCACAATGGTTG | [1647] |
| taxodium_FL_CR | TGGAGAATCTGGACSAATTTGTGAGCCAGATTTCGAATCCACAATGGTTG | [1647] |
| underhilli_AL_HC3 | TGGAGAATCTAGACGAATTTGTGAGCCAGATTTCGAATCCACAATGGTTG | [1647] |
| underhilli_GA_FR | TGGAAAGTCTGGACGAATTTGTGAGCCAGATTTCGAATCCACAATGGTTG | [1647] |
| underhilli_GA_FS | TGGAGAATTTGGACGAATTTGTGAGCCAGATTTCGAATCCACAATGGTTG | [1647] |
| tuberosum | AATTTATTCATCACYGATTTRCAAAACGAAGATGTGACGCGCACTATGTA | [1700] |
| verecundum | AATTTGTTCATCACTGATTTACAAAACGATGATGTGACGAGAACTATGTA | [1534] |
| decimatum | -------------------------------------------------- | [1218] |
| apricarium | AATTTATTCATCACCGATTTACAAAACGAAGATGTGACCCGTACTATGTA | [1697] |
| reptans | AATTTATTCATCACCGATTTGCAAAACGAAGATGTGACCCGTACTATGTA | [1697] |
| anchist_AL_HC | AATTTGTTCGTCACAGATTTACAGAACGAAGATGTGACCCGTACTATGTA | [1697] |
| anchist_DE_DR | AATTTRTTCGTCACAGATTTACARAACGAAGATGTGACCCGTACTATGTA | [1697] |
| anchist_ME_AR | AATTTGTTCGTCACCGATTTACAAAACGAAGATGTGACCCGAACTATGTA | [1697] |
| anchist_NC_NR | AATTTRTTCGTCACMGATTTACAGAACGAAGATGTGACCCGTACTATGTA | [1697] |
| anchist_ME_KR | AATTTATTCGTCACAGATTTACAGAACGAAGATGTGACCCGTACTATGTA | [1697] |
| aranti_GA_FS | AATTTGTTCGTCACCGATTTACAAAACGAAGATGTGACCCGTACTATGTA | [1697] |
| aranti_GA_AS | AATTTGTTCGTCACCGATTTACAAAACGAAGATGTGACCCGTACTATGTA | [1697] |
| aranti_AL_HC | AATTTGTTCGTCACCGATTTACAAAACGAAGATGTGACCCGTACTATGTA | [1697] |
| aranti_SC_LR | AATTTGTTCGTCACCGATTTACAAAACGAAGATGTGACCCGTACTATGTA | [1697] |
| chlorum_NC_GC3 | AATTTGTTCGTCACTGATTTACAAAACGAAGATGTGACCCGTACTATGTA | [1697] |
| chlorum_NC_GC1 | AATTTRTTCGTCACCGATTTACAAAAYGAAGATGTGACCCGTACTATGTA | [1697] |
| chlorum_NC_GC4 | AATTTGTTCGTCACCGATTTACAAAACGAAGAYGTGACTCGTACTATGTA | [1697] |
| confusum_TN_LR | AATTTGTTCGTCACCGATTTACAAAACGAAGATGTGACCCGTACTATGTA | [1697] |
| confusum_GA_GC | AATTTGTTCGTCACCGATTTACAAAACGAAGATGTGACCCGTACTATGTA | [1697] |
| confusum_GA_EC | AATTTGTTCGTCACCGATTTACAAAACGAAGATGTGACYCGTACTATGTA | [1697] |
| confusum_TX_SJR | AATTTGTTCGTCACCGATTTACAAAACGAAGATGTGACSCGTACTATGTA | [1697] |
| confusum_TX_SR | AATTTGTTCGTGACCGATTTACAAAACGAAGATGTGACCCGAACTATGTA | [1697] |
| confusum_TX_Bayou | AATTTGTTCGTCACCGATTTACAAAACGAAGATGTGACCCGMACTATGTA | [1697] |
| definitum_PA_LC | AATTTGTTCGTCACCGATTTACAAAACGAAGATGTRACCCGTACTATGTA | [1697] |
| definitum_SC_GC | AATTTGTTCGTCACCGATTTACAAAACGAAGATGTAACCCGTACTATGTA | [1697] |
| dixiense_GA_WC | AATTTGTTCGTCACCGATTTACAAAACGAAAATGTGACGCGAACTATGTA | [1697] |
| dixiense_SC_LBC | AATTTGTTCGTCACCGATTTACAAAACGAAGATGTGACGCGAACTATGTA | [1697] |
| dixiense_NC_QC | AATTTGTTCGTCACCGATTTACAAAACGAAGATGTGACGCGAACTATGTA | [1697] |
| dixiense_FL_CC | AATTTGTTCGTCACCGATTTACAAAACGAAGATGTGACGCGAACTATGTA | [1697] |
| fibrinflatum_PA_DR | AATTTGTTCGTCACCGATTTACAAAACGAAGATGTGACTCGAACTATGTA | [1697] |
| fibrinflatum_ME_AR | AATTTGTTCGTCACCGATTTACAAAACGAAGATGTGACTCGAACTATGTA | [1697] |
| fibrinflatum_GA_FR | AATCTGTTCGTCACCGATTTACAAAACGAAGATGTGACTCGAACTATGTA | [1697] |
| haysi_AL_BCC3 | AATTTGTTCGTCACCGATTTACAAAACGAAGATGTGACCCGAACTATGTA | [1697] |
| haysi_TX_SJR | AATTTGTTCGTCACCGATTTACAAAACGAAGATGTGACCCGAACTATGTA | [1697] |
| infenestrum_NC_RR | AATTTATTCGTCACCGATTTACAGAACGAAGATGTGACYCGTACTATGTA | [1697] |
| infenestrum_SC_RBC | AATTTGTTCGTCACCGATCTACAGAACGAAGATGTGACCCGTACTATGTA | [1697] |
| jenningsi_TN_PR | AATTTGTTCGTCACCGATTTACAAAACGAAGATGTGACCCGAACTATGTA | [1697] |
| jenningsi_NC_ER | AATTTGTTCGTCACCGATTTACAAAACGAAGATGTGACCCGAACTATGTA | [1697] |
| jenningsi_SC_FC | AATTTGTTCGTCACCGATTTACAAAAYGAAGATGTGACYCGWACTATGTA | [1697] |
| jenningsi_PA_BR | AATTTGTTCGTCACCGATTTGCAAAACGAAGATGTGACTCGTACTATGTA | [1697] |
| jenningsi_GA_AR | AATTTGTTCGTCACCGATTTGCAAAACGAAGATGTGACTCGTACTATGTA | [1697] |
| jonesi_FL_CC1 | AATTTGTTCGTMACCGATTTACAAAACGAAGATGTGACCCGTACTATGTA | [1697] |
| jonesi_AL_BCC | AATTTGTTCGTCACCGATTTACAAAACGAAGATGTGACTCGTACTATGTA | [1697] |
| jonesi_NC_CC | AATTTGTTCGTCACTGATTTACAAAAYGAAGATGTGACCCGTACTATGTA | [1697] |
| jonesi_NC_QC | AATTTGTTCGTCACTGATTTACAAAAYGAAGATGTGACCCGTACTATGTA | [1697] |
| jonesi_GA_WC | AATTTGTTCGTCACTGATTTACAAAATGAAGATGTGACCCGTACTATGTA | [1697] |
| krebsorum_NC_MC | AATTTGTTCGTCACCGATTTACAAAACGAAGATGTGACCCGTACTATGCA | [1697] |
| krebsorum_SC_CC2 | AATTTGTTCGTCACCGATTTACAAAACGAAGATGTGAACCGTACTATGYA | [1697] |
| lakei_PA_NC | AATTTGTTCGTCACTGATTTACAAAACGAAGATGTGACCAGTACTATGTA | [1697] |
| lakei_SC_BR | AATTTGTTCGTCACCGATTTACAAAACGAAGATGTGACCCGTACTATGTA | [1697] |
| lakei_FL_CR | AATTTGTTYGTCACCGATTTACAAAACGAAGATGTRACKCGTACTATGTA | [1697] |

Appendix 1. (Cont.)

| Taxa | Sequence | Base # |
|---|---|---|
| lakei_Taunt_8_MA_TR | AATTTGTTHGTCACYGATTTACAAAAYGAAGATGTGACYCGTACTATGTA | [1697] |

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lakei_Taunt_9_MA_TR     AATTTGTTAGTYACCGATTTACAAAAYGAAGATGTGACCCGTACTATGTA   [1697]
luggeri_NWT             AATTTGTTCATCACCGATTTACAAAACGAAGATGTGACCCGTACTATGTA   [1697]
luggeri_NE_FR           AATTTGTTCATCACCGATTTACAAAACGAAGATGTGACCCGTACTATGTA   [1697]
luggeri_NC_HR           AATTTGTTCATCACCGATTTACAAAACGAAGATGTGACCCGTACTATGTA   [1697]
luggeri_KY_GR3          AATTTGTTCATCACCGATTTACAAAACGAAGATGTGACCCGTACTATGTA   [1697]
'notiale AL BC5+6'      AATTTGTTTGTCACAGATTTACAAAACGAAGATGTGACTCGAACTATGTA   [1697]
notiale_VA_RR           AATTTGTTCGTCACCGATTTACAAAACGAAGATGTGACTCGAACTATGTA   [1697]
notiale_TN_CC           AATTTGTTCGTCACCGATTTACAAAACGAAGATGTGACTCGTACTATGTA   [1697]
notiale_SC_RBC          AATTTGTTYGTCACCGATTTACAAAACGAAGATGTGACYTGWACTATSTA   [1697]
'notiale AL BC6+6'      AATTTGTTCGTCACCGATTTACAAAACGAAGATGTGACCCGTACTATGTA   [1697]
nyssa_AL_BC             AATTTATTCGTCACMGATTTACAGAACGAAGATGTGACCCGTACTATGTA   [1697]
nyssa_ME_AR             AATTTATTCGTCACAGATTTACAGAACGAAGATGTGACCCGTACTATGTA   [1697]
nyssa_VA_RR             AATTTATTCGTCACAGATTTACAGAACGAAGATGTGACCCGTACTATGTA   [1697]
nyssa_ME_PR             AATTTATTCGTCACAGATTTACAGAACGATGATGTGACCCGTACTATGTA   [1697]
nyssa_NC_TR             AATTTATTCGTCACAGATTTACAGAACGAAGATGTGACCCGTACTATGTA   [1697]
ozarkense_MO_GR2        AATTTGTTCGTCACCGATTTACAAAACGAAGATGTGACCCGTACAATGTA   [1697]
ozarkense_MO_GR1        AATTTGTTCGTCACCGATTTACAAAACGAAGATGTGACCCGTACTATGTA   [1697]
penobsco_ME_PR1         AATTTRTTCGTCACCGATTTACAGAACGAAGATGTGACCCGTACTATGTA   [1697]
penobsco_ME_PR2         AATTTATTCGTCACCGATTTACAGAACGAAGATGTGACCCGTACTATGTA   [1697]
podostemi_NC_TR         AATTTATTCATCACTGATTTACAGAACGAAGATGTGACCCGTACTATGTA   [1697]
podostemi_GA_AS         AATTTATTCATCACTGATTTACAGAACGAAGATGTGACCCGTACTATGTA   [1697]
podostemi_MS_BC         AATTTATTCATCACTGATTTACAGAACGAAGATGTGACCCGTACTATGTA   [1697]
podostemi_GA_CR         AATTTATTCATCACYGATTTACAGAACGAAGATGTGACCCGTACTATGTA   [1697]
remissum_NC_NR2         AATTTATTCGTCACCGATTTACAGAACGAAGATGTGACCCGTACTATGTA   [1697]
remissum_NC_NR1         AATTTATTCGTCACCGATTTACAGAACGAAGATGTGACCCGTACTATGTA   [1697]
remissum_NC_NR3         AATTTATTCGTCACCGATTTACAGAACGAAGATGTGACCCGTACTATGTA   [1697]
'snowi AL BC 4+6'       AATTTGTTCGTCACCGATTTACAAAACGAAGATGTGACCCGTACTATGTA   [1697]
snowi_TN_CC             AATTTGTTCGTCACCGATTTACAAAACGAAGATGTGACTCGWACTATGTA   [1697]
'snowi AL BC 4+4'       AATTTGTTTGTCACAGATTTACAAAACGAAGATGTGACTCGAACTATGTA   [1697]
taxodium_GA_CC2         AATTTGTTCGTCACYGATTTACAAAACGAAGATGTGACCCGTACTATGTA   [1697]
taxodium_FL_CR          AATTTGTTCGTCACCGATTTACAAAACGAAGATGTGACGCGTACTATGTA   [1697]
underhilli_AL_HC3       AATTTGTTCGTCACCGATTTACAAAACGAAGATGTGACTCGAACTATGTA   [1697]
underhilli_GA_FR        AATCTGTTCGTCACCGATTTACAAAACGAAGATGTGACTCGAACTATGTA   [1697]
underhilli_GA_FS        AATTTGTTCGTCACCGATTTACAAAACGAAGATGTGACCCGTACTATGTA   [1697]


tuberosum               CGCCGGCAACTATGAMCGTGATGGKTTGAGCRTGCATCCGGATGTTTACG   [1750]
verecundum              CGCAGGGAACTATGAACGTGACCAGCTGAGCGTTTATCCGGACGCTTACG   [1584]
decimatum               ---------------------------------------------------  [1218]
apricarium              YGCYGGCAACTATGAACGTGACCARCTGAGCGTTTATCCGGATGCATACG   [1747]
reptans                 CGCCGGCAACTATGAACGTGACCAGCTGAGCGTTTATCCGGATGCTTATG   [1747]
anchist_AL_HC           YGCCGGCAACTATGAACGTGACCAGACGAGCGTCTATCCAGATGCTTATG   [1747]
anchist_DE_DR           CGCCGGCAACTATGAACGTGACCAGACGAGCGTTTATCCGGATGCTTACG   [1747]
anchist_ME_AR           CGCCGGCAACTATGAACGTGATCAGACGAGCGTTTATCCGGATGCTTACG   [1747]
anchist_NC_NR           CGCCGGCAACTATGAACGTGACCAGACGAGCGTTTATCCGGATGCTTACG   [1747]
anchist_ME_KR           CGCCGGCAACTATGAACGTGACCAGAYGAGCGTTTATCCGGATGCTTACG   [1747]
aranti_GA_FS            CGCCGGCAATTATGAACGTGACCAGCCGAGAGTTTATCCGGACRCTTACG   [1747]
aranti_GA_AS            CGCCGGCAATTATGAACGTGACCAGCCGAGAGTTTATCCGGACRCTTACG   [1747]
aranti_AL_HC            CGCCGGCAATTATGAACGTGACCAGCCGAGAGTTTATCCGGACRCTTACG   [1747]
aranti_SC_LR            CGCCGGCAATTATGAACGTGACCAGCCGAGAGTTTATCCGGACGCTTACG   [1747]
chlorum_NC_GC3          CGCTGGAAATTATGAACGTGATCAGTCGAGCGTTTATCCGGATGCTTACG   [1747]
chlorum_NC_GC1          CGCCGGMAATTATGAACGTGACCAGCYGAGCGTTTATCCGGATGCTTACG   [1747]
chlorum_NC_GC4          CGCYGGMAATTATGAACGTGACCAGCCGAGCGTTTATCCGGATGCTTACG   [1747]
confusum_TN_LR          CGCAGGAAATTATGAACGTGATCAGTCGAGCGTTTATCCGGATGCTTACG   [1747]
confusum_GA_GC          CGCTGGGAATTATGAACGTGACCAGCCGAGCGTTTATCCGGATGCTTACG   [1747]
confusum_GA_EC          CGCAGGMAATTATGAACGTGATCAGTCGAGCGTTTATCCGGATGCTTACG   [1747]
confusum_TX_SJR         CGCYGGMAATTATGAACGTGATCAGTCGAGCGTTTATCCGGATGCTTAYG   [1747]
confusum_TX_SR          CGCTGGAAATTATGAACGTGATCAGTCGAGCGTTTATCCGGATGCTTACG   [1747]
confusum_TX_Bayou       CGCTGGMAATTATGAACGTGATCAGTCGAGCGTTTATCCGGATGCTTACG   [1747]
definitum_PA_LC         CGCCGGCAATTATGAACGTGATCAGTCGAGCGTTTATCCGGATGCTTATG   [1747]
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Appendix 1. (Cont.)

| Taxa | Sequence | Base # |
|---|---|---|
| definitum_SC_GC | CGCCGGCAATTATGAACGTGATCAGTCGAGCGTTTATCCGGATGCTTATG | [1747] |
| dixiense_GA_WC | CGCCGGCAATTATGAACGTGACCAACCGAGAGTTTATTCAGACGCTTACG | [1747] |
| dixiense_SC_LBC | CGCCGGCAATTATGAACGTGACCAACCGAGAGTTTATTCAGACGCTTACG | [1747] |
| dixiense_NC_QC | CGCCGGCAATTATGAACGTGACCAACCGAGAGTTTATTCAGACGCTTACG | [1747] |

| | | |
|---|---|---|
| dixiense_FL_CC | CGCCGGCAATTATGAACGTGACCAACCGAGAGTTTATTCAGACGCTTACG | [1747] |
| fibrinflatum_PA_DR | CGCTGGAAATTATGAACGTGACCAGTCAAGTGTTTATCCGGATGCTTACG | [1747] |
| fibrinflatum_ME_AR | CGCCGGCAACTATGAACGTGACCAGTCGAGCGTTTATCCGGATGCTTACG | [1747] |
| fibrinflatum_GA_FR | CGCTGGAAATTATGAACGTGACCAGTCGAGCGTTTATCCGGATGCTTAYG | [1747] |
| haysi_AL_BCC3 | CGCCGGCAATTATGAACGTGATCAGTCGAGCGTTTATCCGGATGCTTACG | [1747] |
| haysi_TX_SJR | CGCCGGCAATTATGAACGTGATCAGTCGAGCGTTTATCCGGATGCTTACG | [1747] |
| infenestrum_NC_RR | CGCYGGCAATTATGAACGTGACCAGCCKAGCGTCTATCCGGATGCTTACG | [1747] |
| infenestrum_SC_RBC | CGCYGGCAACTATGAACGTGACCACCCGAGTGTTTATCCGGATGCTTACG | [1747] |
| jenningsi_TN_PR | CGCTGGTAATTATGAACGTGATCAGTCGAGCGTTTATCCGGATGCTTACG | [1747] |
| jenningsi_NC_ER | CGCCGGCAATTATGAACGTGATCAGTCGAGCGTTTATCCGGATGCTTACG | [1747] |
| jenningsi_SC_FC | CGCCGGCAATTATGAACGTGATCAGTCGAGCGTTTATCCGGATGCTTACG | [1747] |
| jenningsi_PA_BR | CGCCGGCAATTATGATCGTGATCAGTCGAGTGTTTATCCGGATGCTTACG | [1747] |
| jenningsi_GA_AR | TGCCGGCAATTATGAACGTGATCAGTCGAGCGTTTATCCGGATG------ | [1741] |
| jonesi_FL_CC1 | CGCYGGCAATTATGAACGTGATCAGTCGAGCGTTTATCCGGATGCTTATG | [1747] |
| jonesi_AL_BCC | CGCCGGCAATTATGAACGTGACCAGCCGAGCGTTTATCCGGATGCTTACG | [1747] |
| jonesi_NC_CC | CGCTGGAAATTATGAACGTGATCAGTCGAGCGTTTATCCGGATGCTTACG | [1747] |
| jonesi_NC_QC | CGCTGGAAATTATGAACGTGATCAGTCGAGCGTTTATCCGGATGCTTACG | [1747] |
| jonesi_GA_WC | CGCTGGAAATTATGAACGTGATCAGTCGAGCGTTTATCCGGATGCTTACG | [1747] |
| krebsorum_NC_MC | CGCTGGAAATTATGAACGTGACCAGCCAAGCGTTTATCCGGATGCTTATG | [1747] |
| krebsorum_SC_CC2 | CGCTGGAAATTATGAACGTGACCAGCCAAGCGTTTATCCGGATGCTTATG | [1747] |
| lakei_PA_NC | CGCTGGAAATTATGAACGTGATCAGTCGAGCGTTTATCCGGATGCTTACG | [1747] |
| lakei_SC_BR | CGCTGGCAATTATGAACGTGACCAGTCGAGCGTTTATCCGGATGCTTATG | [1747] |
| lakei_FL_CR | CGCCGGCAATTATGAACGTGAYCAGYCGAGCGTTTATCCGGATGCTTACG | [1747] |
| lakei_Taunt_8_MA_TR | CGCYGGMAATTATGAACGTGAYCAGYCGAGCGTTTATCCGGATGCTTACG | [1747] |
| lakei_Taunt_9_MA_TR | CGCTGGAAATTATGAACGTGATCAGTCGAGCGTTTATCCGGATGCTTACG | [1747] |
| luggeri_NWT | CGCCGGCAATTATGAACGTGACCAGCCGAGCGTTTATCCGGACGCTTACG | [1747] |
| luggeri_NE_FR | CGCCGGCAATTATGAACGTGACCAGCCGAGCGTTTATCCGGACGCTTACG | [1747] |
| luggeri_NC_HR | CGCCGGCAATTATGAACGTGACCAGCCGAGCGTTTATCCGGACGCTTACG | [1747] |
| luggeri_KY_GR3 | CGCCGGCAATTATGAACGTGACCAGCCGAGCATTTATCCGGACGCTTACG | [1747] |
| 'notiale AL BC5+6' | CGCTGGAAATTATGAACGTGACCAACCGAGCGTTTATCCGGATGCTTACG | [1747] |
| notiale_VA_RR | CGCYGGAAATTATGAACGTGACCAGTCAAGYGTTTATCCGGATGCTTACG | [1747] |
| notiale_TN_CC | CGCCGGCAACTATGAACGTGACCAGYCGAGCGTTTATCCGGATGCTTACG | [1747] |
| notiale_SC_RBC | CGCYGGCAATTATGAACGTRRCCAGTCGAGCGTTTATCCGGATGCTTACG | [1747] |
| 'notiale AL BC6+6' | CGCCGGCAACTATGAACGTGACCAGCCGAGCGTTTATCCGGATGCTTACG | [1747] |
| nyssa_AL_BC | CGCCGGCAACTATGAACGTGACCAGACGAGCGTTCATCCGGATGCATACG | [1747] |
| nyssa_ME_AR | CGCCGGCAACTATGAACGTGACCAGACGAGCGTTCATCCGGATGCWTACG | [1747] |
| nyssa_VA_RR | CGCCGGCAACTATGAACGTGACCAGACGAGCGTTTATCCGGATGCTTACG | [1747] |
| nyssa_ME_PR | CGCCGGCAACTATGAACGTGACCAGACGAGCGTTTATCCGGATGYATACG | [1747] |
| nyssa_NC_TR | CGCCGGCAACTATGAACGTGACCAGACGAGCGTTCATCCGGATGCTTACG | [1747] |
| ozarkense_MO_GR2 | CGCCGGCAATTACGAACGTGATCAGTCGAGCGTTTATCCGGACGCTTACG | [1747] |
| ozarkense_MO_GR1 | CGCCGGCAATTACGAACGTGAYCAGTCGAGCGTTTATCCGGACGCTTACG | [1747] |
| penobsco_ME_PR1 | CGCCGGCAACTATGAACGTGACCACACGAGTGTTTATCCGGATGCTTACG | [1747] |
| penobsco_ME_PR2 | CGCCGGCAACTATGAACGTGACCACACGAGTGTTTATCCGGATGCTTACG | [1747] |
| podostemi_NC_TR | CGCCGGCAATTATGAACGTGACCAGTCGAGCGTTTATCCGGATGCTTACG | [1747] |
| podostemi_GA_AS | CGCCGGCAATTATGAACGTGACCAGTCGAGCGTTTATCCGGATGCTTACG | [1747] |
| podostemi_MS_BC | CGCCGGCAATTATGAACGTGACCAGTCGAGCGTTTATCCGGATGCTTACG | [1747] |
| podostemi_GA_CR | CGCCGGCAATTATGAACGTGACCAGTCGAGCGTTTATCCGGATGCTTACG | [1747] |
| remissum_NC_NR2 | CGCCGGCAATTATGAACGTGACCAGACGAGYGTTTATCCGGATGCTTACG | [1747] |
| remissum_NC_NR1 | CGCCGGCAACTATGAACGTGACCAGACGAGTGTTTATCCGGATGCTTACG | [1747] |
| remissum_NC_NR3 | CGCCGGCAACTATGAACGTGACCAGACGAGTGTTTATCCGGATGCTTACG | [1747] |
| 'snowi AL BC 4+6' | CGCCGGCAACTATGAACGTGACCAGCCGAGCGTTTATCCGGATGCTTACG | [1747] |
| snowi_TN_CC | CGCYGGCAACTATGAACGTGACCAGCCGAGCGTTTATCCGGATGCTTACG | [1747] |
| 'snowi AL BC 4+4' | CGCTGGAAATTATGAACGTGACCAACCGAGCGTTTATCCGGATGCTTACG | [1747] |
| taxodium_GA_CC2 | CGCYGGCAATTATGAACGTGAYCAGYCGAGCGTTTATCCGGATGCTTACG | [1747] |
| taxodium_FL_CR | CGCTGGAAATTATGAACGTGACCAGCCGAGCGTTTATCCGGATGCTTACG | [1747] |
| underhilli_AL_HC3 | CGCTGGAAATTATGAACGTGACCAGTCGAGCGTTTATCCGGATGCTTATG | [1747] |
| underhilli_GA_FR | CGCTGGAAATTATGAACGTGACCAGTCGAGCGTTTATCCGGATGCTTACG | [1747] |
| underhilli_GA_FS | CGCCGGCAAYTATGAACGTGACCAGTCGAGCGTTTATCCGGATGCTTACG | [1747] |

Appendix 1. (Cont.)

| Taxa | Sequence | Base # |
|---|---|---|
| tuberosum | ACGTGGYCGGGAAAGTGCACGGCGTGTGCGACAAGTTGATTGAGGTGTTT | [1800] |
| verecundum | ATGTTGTTGGAAAAGTGCACGGCGTGTGCGATAAGTTGATTGAGGTGTTT | [1634] |
| decimatum | ---------- | [1218] |
| apricarium | ACGTTGTCGGGAAAGTGCATGGCGTGTGCGACAAGTTGATTGAGGTGTTT | [1797] |

| | | |
|---|---|---|
| reptans | ACATTGCTGGCAAAGTGCAYGGTGTGTGCGACAAGTTGATTGAGGTGTTT | [1797] |
| anchist_AL_HC | ATGTTGCTGGTAAAGTGCATGGAGTATGCGATAAGTTAATTGAGGTGTTT | [1797] |
| anchist_DE_DR | ATGTTGCTGGYAAAGTGCAYGGAGTATGCGATAAGTTGATTGAGGTGTTT | [1797] |
| anchist_ME_AR | ATGTTGCTGGTAAAGTGCATGGAGTATGCGATAAGTTGATTGAGGTGTTT | [1797] |
| anchist_NC_NR | ATGTTGCTGGYAAAGTGCATGGAGTATGCGATAAGTTGATTGAGGTGTTT | [1797] |
| anchist_ME_KR | ATGTTGCTGGTAAAGTGCATGGAGTATGCGATAAGTTGATTGAGGTGTTT | [1797] |
| aranti_GA_FS | ATGTTGCCGGCAAAGTGCATGGGGTATGCGATAAATTGATTGAAGTGTTT | [1797] |
| aranti_GA_AS | ATGTTGCCGGCAAAGTGCATGGGGTATGCGATAAATTGATTGAAGTGTTT | [1797] |
| aranti_AL_HC | ATGTTGCCGGCAAAGTGCATGGGGTATGCGATAAATTGATTGAAGTGTTT | [1797] |
| aranti_SC_LR | ATGTTGCCGGAAAAGTGCATGGGGTATGCGATAAATTGATTGAAGTGTTT | [1797] |
| chlorum_NC_GC3 | ACGTTGCCGGTAAAGTACATGGGGTATGCGACAAGTTGATTGAAGTGTTT | [1797] |
| chlorum_NC_GC1 | ACGTTGCCGGCAAAGTGCATGGGGTATGCGACAAGTTGATTGAAGTGTTC | [1797] |
| chlorum_NC_GC4 | ACGTTGCCGGCAAAGTRCATGGGGTATGCGACAAGTTGATTGAAGTGTTC | [1797] |
| confusum_TN_LR | ACGTTGCCGGTAAAGTACATGGGGTATGCGACAAGTTGATTGAAGTGTTC | [1797] |
| confusum_GA_GC | ACGTTGCCGGCAAAGTGCATGGGGTATGCGATAAGTTGATTGAAGTGTTC | [1797] |
| confusum_GA_EC | ACGTTGCCGGTAAAGTRCATGGGGTATGCGAYAAGTTGATTGAAGTGTTC | [1797] |
| confusum_TX_SJR | AMGTTGCCGGYAAAGTRCATGGAGTATGCGAYAAGTTGATTGAAGTGTTC | [1797] |
| confusum_TX_SR | ACGTTGCCGGCAAAGTGCATGGGGTATGCGACAAGTTGATTGAAGTGTTC | [1797] |
| confusum_TX_Bayou | ACGTTGCCGGTAAAGTACATGGCGTATGCGATAAGTTGATTGAAGTGTTT | [1797] |
| definitum_PA_LC | ACGTTGCCGGTAAAGTACATGGGGTATGCGACAAGTTGATTGAAGTGTTC | [1797] |
| definitum_SC_GC | ACGTTGCCGGTAAAGTACATGGGGTATGCGACAAGTTGATTGAAGTGTTC | [1797] |
| dixiense_GA_WC | ACGTTGCCGGCAAAGTCAATGTAGTATGTGATAGGTTGATTGAAGTGTTT | [1797] |
| dixiense_SC_LBC | ACGTTGCCGGCAAAGTCAATGTAGTATGTGATAGGTTGATTGAAGTGTTT | [1797] |
| dixiense_NC_QC | ACGTTGCCGGCAAAGTCAATGTAGTATGTGATAGGTTGATTGAAGTGTTT | [1797] |
| dixiense_FL_CC | ACGTTGCCGGCAAAGTCAATGTAGTATGTGATAGGTTGATTGAAGTGTTT | [1797] |
| fibrinflatum_PA_DR | ACGTGGCCGGAAAAGTGCATGGGGTATGCGATAAATTGATTGAAGTGTTT | [1797] |
| fibrinflatum_ME_AR | ATGTKGCCGGCAAAGTGCATGGGGTATGCGATAAATTGATTGAAGTGTTT | [1797] |
| fibrinflatum_GA_FR | ACGTTGCTGGMAAAGTGCATGGGGTATGCGATAAATTGATTGAAGTRTTT | [1797] |
| haysi_AL_BCC3 | AAGTTGCCGGCAAAGTGCATGGAGTATGCGACAAGTTGATTGAAGTGTTC | [1797] |
| haysi_TX_SJR | AAGTTGCCGGCAAAGTGYATGGAGTATGCGACAAGTTGATTGAAGTGTTC | [1797] |
| infenestrum_NC_RR | ACGTAGYCGGCAAAGTGCATGGAGTATGCGATAMGTTGATTGAGGTGTTT | [1797] |
| infenestrum_SC_RBC | ATGTTGCTGGCAAAGTGCATGGAGTATGCGATAAGTTGATTGAGGTGTTT | [1797] |
| jenningsi_TN_PR | ACGTTGCTGGCAAAGTGCACGGAGTATGCGATAAGTTGATTGAAGTATTT | [1797] |
| jenningsi_NC_ER | ATGTTGCCGGCAAAGTGCACGGAGTATGCGATAAATTGATTGAGGTGTTT | [1797] |
| jenningsi_SC_FC | ATRTTGCCGGCAAAGTGCATGGGGTATGYGATAAATTGATTGAGGTGTTT | [1797] |
| jenningsi_PA_BR | ACGTTGTCGGCAAAGTGCACGGAGTATGCGATAAGTTGATTGAAGTGTTT | [1797] |
| jenningsi_GA_AR | ---TTGCCGGCAAAGTGCATGGGGTATGCGATAAATTGATTGAGGTGTTT | [1788] |
| jonesi_FL_CC1 | ACGTTGCCGGCAAGGTGCATGGGGTATGCGACAAGTTGATTGAAGTGTTT | [1797] |
| jonesi_AL_BCC | AAGTTGCCGGCAAAGTGCATGGGGTATGCGATAAATTGATTGAAGTGTTT | [1797] |
| jonesi_NC_CC | ACGTTGCCGGYAAAGTRCATGGAGTATGCGAYAAGTTGATTGAAGTSTTC | [1797] |
| jonesi_NC_QC | ACGTTGCCGGYAAAGTRCATGGAGTATGCGACAAGTTGATTGAAGTSTTY | [1797] |
| jonesi_GA_WC | ACGTTGCCGGTAAAGTACATGGGGTATGCGACAAGTTGATTGAAGTGTTT | [1797] |
| krebsorum_NC_MC | ACGTTGCCGGTAAAGTACATGGGGTATGCGACAAGTTGATTGAAGTGTTC | [1797] |
| krebsorum_SC_CC2 | ACGTTGCCGGTAAAGTACATGGGGTATGCGACAAGTTGATTGAAGTGTTC | [1797] |
| lakei_PA_NC | ACGTTGCCGGTAAAGTACATGGGGTATGCGATAAGTTGATTGAAGTGTTC | [1797] |
| lakei_SC_BR | ACGTTGCCGGCAAAGTGCATGGGGTATGCGATAAGTTGATTGAAGTGTTT | [1797] |
| lakei_FL_CR | ACGTTGCCGGCAAAGTGCATGGGGTATGCGATAAGTTGATTGAAGTGTTT | [1797] |
| lakei_Taunt_8_MA_TR | AMGTTGCCGGCAAAGTGCATGGGGTATGCGAYAAGTTGATTGAAGTGTTC | [1797] |
| lakei_Taunt_9_MA_TR | AMGTTGCCGGCAAAGTGCATGGGGTATGCGACAAGTTGATTGAAGTGTTY | [1797] |
| luggeri_NWT | ACGTTGCCGGCAAAGTGCATGGGGTCTGCGATAAGTTGATTGAAGTGTTT | [1797] |
| luggeri_NE_FR | ACGTTGCCGGCAAAGTGCATGGGGTCTGCGATAAGTTGATTGAAGTGTTT | [1797] |
| luggeri_NC_HR | ACGTTGCCGGCAAAGTGCATGGGGTCTGCGATAAGTTGATTGAAGTGTTT | [1797] |
| luggeri_KY_GR3 | ACGTTGCCGGCAAAGTGCATGGGGTATGCGATAAGTTGATTGGAGTGTTT | [1797] |
| 'notiale AL BC5+6' | ATGTTGCCGGCAAAGTGCATGGGGTATGCGATAAATTRATTGAAGTATTT | [1797] |
| notiale_VA_RR | ACGTGGCCGGAAAAGTGCATGGGGTATGCGATAAATTGATTGAAGTGTTT | [1797] |

Appendix 1. (Cont.)

| Taxa | Sequence | Base # |
|---|---|---|
| notiale_TN_CC | ATGTTGCCGGCAAAGTGCATGGGGTATGCGATAAATTRATTGAAGTGTTT | [1797] |
| notiale_SC_RBC | ATGTTGCCGGCAAAGTGCATGGGGTATGCGATAAATTGATTGAAGTGTTT | [1797] |
| 'notiale AL BC6+6' | ATGTTGCCGGCAAAGTGCATGGGGTATGCGATAAATTAATTGAAGTGTTT | [1797] |
| nyssa_AL_BC | ATGTTGCTGGTAAAGTGCATGGAGTATGCGATAAGTTGATTGAGGTGTTT | [1797] |
| nyssa_ME_AR | ATGTTGCTGGTAAAGTGCATGGAGTATGCGATAAGTTGATTGAGGTGTTT | [1797] |
| nyssa_VA_RR | ATGTTGCTGGTAAAGTGCATGGAGTATGCGACAAGTTGATTGAGGTGTTT | [1797] |
| nyssa_ME_PR | AYGTTGCTGGTAAAGTGCATGGAGTATGCGAYAAGTTGATTGAGGTGTTT | [1797] |
| nyssa_NC_TR | ATGTTGCTGGTAAAGTGCATGGAGTATGCGAYAAGTTGATTGAGGTGTTT | [1797] |
| ozarkense_MO_GR2 | ACGTTGCCGGYAAAGTGCATGGGGTATGCGATAAGTTGATTGAAGTGTTY | [1797] |
| ozarkense_MO_GR1 | ACGTTGCCGGTAAAGTGCATGGAGTATGCGATAAGTTGATTGAAGTGTTC | [1797] |

| | | |
|---|---|---|
| penobsco_ME_PR1 | ATGTTGCTGGCAAAGTGCATGGAGTATGCGATAAGTTGATTGAGGTGTTT | [1797] |
| penobsco_ME_PR2 | ATGTTGCTGGCAAAGTGCATGGAGTATGCGATAAGTTGATTGAGGTGTTT | [1797] |
| podostemi_NC_TR | ACGTAGCCGGCAAAGTGCATGGAGTTTGCGATAAATTGATTGAAGTGTTT | [1797] |
| podostemi_GA_AS | ACGTAGCCGGCAAAGTGCATGGAGTTTGCGATAAATTGATTGAAGTGTTT | [1797] |
| podostemi_MS_BC | ACGTAGCCGGCAAAGTGCATGGAGTTTGCGATAAATTGATTGAAGTGTTT | [1797] |
| podostemi_GA_CR | ACGTAGCCGGCAAAGTGCATGGAGTTTGCGATAAATTGATTGAAGTGTTT | [1797] |
| remissum_NC_NR2 | ATGTAGCCGGYAAAGTGCACGGAGTATGCGATAAGTTGATTGAGGTGTTT | [1797] |
| remissum_NC_NR1 | ATGTAGCCGGYAAAGTGCATGGAGTATGCGATAAGTTGATTGARGTGTTT | [1797] |
| remissum_NC_NR3 | AYGTAGCCGGYAAAGTGCATGGAGTATGCGATAAGTTGATTGAAGTGTTT | [1797] |
| 'snowi AL BC 4+6' | ATGTTGCCGGCAAAGTGCATGGGGTATGCGATAAATTAATTGAAGTGTTT | [1797] |
| snowi_TN_CC | ACGTTGCCGGCAAARTGCATGGGGTATGCGATAAATTAATTGAAGTGTTT | [1797] |
| 'snowi AL BC 4+4' | ATGTTGCCGGCAAAGTGCATGGGGTATGCGATAAATTGATTGAAGTATTT | [1797] |
| taxodium_GA_CC2 | ACGTTGCCGGCAAAGTGCATGGGGTATGCGATAAGTTGATTGAAGTGTTT | [1797] |
| taxodium_FL_CR | ACGTTGCCGGCAAAGTGCATGGGGTATGCGAYAAGTTGATTGAAGTGTTT | [1797] |
| underhilli_AL_HC3 | ACGTTGCCGGAAAAGTGCATGGGGTATGCGATAAATTGATTGAAGTATTT | [1797] |
| underhilli_GA_FR | ACGTTGCCGGCAAAGTGCATGGGGTATGCGATAAATTGATTGAAGTRTTT | [1797] |
| underhilli_GA_FS | ATGTTGCCGGCAAAGTGCATGGGGTATGCGATAARTTGATTGAAGTGTTT | [1797] |

| | | |
|---|---|---|
| tuberosum | GAGAAGCAGGRCAAGGAATTCGAACTGCCAAAAATTACATGCTACGTTAA | [1850] |
| verecundum | GAGAAGCAGGATACGGAATTTGAACTGCCGAAAATTACATGCTACGTTAA | [1684] |
| decimatum | ---------- | [1218] |
| apricarium | GAGAAGCAGGACAAGGAATACGAACTGCCGAAAATTACATGCTACGTTAA | [1847] |
| reptans | GAGAAGCAGGACAAGGAATACGAACTRCCGAAAATTACGTGTTACGTCAA | [1847] |
| anchist_AL_HC | GAAAAGCAGGAAAAGGAATTTGAATTGCCGAAAATTACATGCTTCGTTAA | [1847] |
| anchist_DE_DR | GAAAAGCAGGAAAAGGAATTCGAATTGCCGAAAATTACATGCTWCGTTAA | [1847] |
| anchist_ME_AR | GAAAAGCAGGAAAAGGAATTCGAATTGCCGAAAATTACATGCTTCGTTAA | [1847] |
| anchist_NC_NR | GAAAAGCAGGAAAAGGAATTCGAATTGCCGAAAATTACATGCTTCGTTAA | [1847] |
| anchist_ME_KR | GAAAAGCAGGAAAAGGAATTCGAATTGCCGAAAATTACATGCTWCGTTAA | [1847] |
| aranti_GA_FS | GAGAAGCAGGAAAAGGAATTCGAATTGCCGAAAATTACATGCTACGTTAA | [1847] |
| aranti_GA_AS | GAGAAGCAGGAAAAGGAATTCGAATTGCCGAAAATTACATGCTACGTTAA | [1847] |
| aranti_AL_HC | GAGAAGCAGGAAAAGGAATTCGAATTGCCGAAAATTACATGCTACGTTAA | [1847] |
| aranti_SC_LR | GAGAAGCAGGAAAAGGAATTCGAATTGCCGAAAATTACATGCTACGTTAA | [1847] |
| chlorum_NC_GC3 | GAGAAGCAGGGAAAGGAATTCGAATTGCCGAAAATTACCTGCTACGTTAA | [1847] |
| chlorum_NC_GC1 | GAGAAGCAGGAAAAGGAATTCGAATTGCCGAAAATTACATGCTACGTTAA | [1847] |
| chlorum_NC_GC4 | GAGAAGCAGGAAAAGGAATTCGAATTGCCGAAAATTACATGCTACGTTAA | [1847] |
| confusum_TN_LR | GAGAAGCAGGAAAAGGAATTCGAATTGCCGAAAATTACATGCTTCGTTAA | [1847] |
| confusum_GA_GC | GAGAAGCAGGAAAAGGAATTCGAATTGCCGAAAATTACATGTTACGTTAA | [1847] |
| confusum_GA_EC | GAGAAGCAGGAAAAGGAATTCGAATTGCCGAAAATTACATGCTACGTTAA | [1847] |
| confusum_TX_SJR | GAGAAGCAGGRAAAGGAATTCGAATTGCCGAAAATTACATGCTACGTTAA | [1847] |
| confusum_TX_SR | GAGAAGCAGGGAAAGGAATTCGAATTGCCGAAAATTACCTGTTACGTTAA | [1847] |
| confusum_TX_Bayou | GAGAAGCAGGAAAAGGAATTCGAATTGCCGAAAATTACATGCTACGTTAA | [1847] |
| definitum_PA_LC | GAGAAGCAGGGAAAGGAATTCGAATTGCCGAAAATTACCTGCTACGTTAA | [1847] |
| definitum_SC_GC | GAGAAGCAGGGAAAGGAATTCGAATTGCCGAAAATTACCTGCTACGTTAA | [1847] |
| dixiense_GA_WC | GAGAAGCAGGAAAAGGAATTTGAACTACCAAAAATTACATGCTACGTTAA | [1847] |
| dixiense_SC_LBC | GAGAAGCAGGAAAAGGAATTTGAACTACCAAAAATTACATGCTACGTTAA | [1847] |
| dixiense_NC_QC | GAGAAGCAGGAAAAGGAATTTGAACTACCAAAAATTACATGCTACGTTAA | [1847] |
| dixiense_FL_CC | GAGAAGCAGGAAAAGGAATTTGAACTACCAAAAATTACATGCTACGTTAA | [1847] |
| fibrinflatum_PA_DR | GAGAATCAGGAAAAGGAATTCGAATTGCCGAAAATTACATGCTACGTTAA | [1847] |
| fibrinflatum_ME_AR | GAGAAGCAAGAAAAGGAATTTGAATTGCCGAAAATTACATGCTACGTTAA | [1847] |
| fibrinflatum_GA_FR | GAGAAKCAGGAAAAGGAATTCGAATTGCCGAAAATTACATGCTACGTTAA | [1847] |

Appendix 1. (Cont.)

| Taxa | Sequence | Base # |
|---|---|---|
| haysi_AL_BCC3 | GAGAAGCAGGAAAAGGAATTCGAATTGCCGAAAATTACCTGTTACGTTAA | [1847] |
| haysi_TX_SJR | GAGAAGCAGGAAAAGGAATTCGAATTGCCGAAAATTACCTGTTACGTTAA | [1847] |
| infenestrum_NC_RR | GAGAAGCAGGAAAAGGAATTCGAATTGCCGAAAATTACATGCTACGTTAA | [1847] |
| infenestrum_SC_RBC | GAAAAGCAGGAAAAGGAATTCGAATTGCCGAAAATTACATGCTACGTTAA | [1847] |
| jenningsi_TN_PR | GAAAAGCAGGAAAAGGAATTCGAATTGCCGAAAATAACATGCTACGTTAA | [1847] |
| jenningsi_NC_ER | GAGAAGCAGGAAAAGGAATTCGAACTGCCGAAAATTACATGCTACGTTAA | [1847] |
| jenningsi_SC_FC | GAGAAGCAGGAAAAGGAATTCGAACTGCCGAAAATTACATGCTACGTTAA | [1847] |
| jenningsi_PA_BR | GAGATGCAGGAAAAGGAATTCGAATTGCCGAAAATAACATGCTACGTTAA | [1847] |
| jenningsi_GA_AR | GAGAAGCAGGAAAAGGAATTCGAACTGCCGAAAATTACATGCTACGTTAA | [1838] |
| jonesi_FL_CC1 | GARAAGCAGGGAAAGGAATTCGAATTGCCGAAAATCACCTGCTACGTTAA | [1847] |
| jonesi_AL_BCC | GAGAAGCAGGGAAAGGAATTCGAATTGCCGAAAATCACCTGCTACATTAA | [1847] |
| jonesi_NC_CC | GAGAAGCAGGGAAAAGAATTCGAATTGCCGAAAATYACATGCTACGTTAA | [1847] |
| jonesi_NC_QC | GARAAGCAGGGAAAGGAATTCGAATTGCCGAAAATYACATGCTACGTTAA | [1847] |

| | | |
|---|---|---|
| jonesi_GA_WC | GAAAAGCAGGGAAAGGAATTCGAATTGCCTAAAATCACCTGCTACGTTAA | [1847] |
| krebsorum_NC_MC | GAGAAGCAGGGAAAGGAATTCGAATTGCCGAAAATTACATGCTACGTTAA | [1847] |
| krebsorum_SC_CC2 | GAGAAGCAGGGAAAGGAATTCGAATTGCCGAAAATTACATGCTACGTTAA | [1847] |
| lakei_PA_NC | GAGAAGCAGGAAAAGGAATTCGAATTGCCGAAAATTACATGTTACGTTAA | [1847] |
| lakei_SC_BR | GAGAAGCAGGAAACGGAATTCGAATTGCCGAAAATTACATGTTACGTTAA | [1847] |
| lakei_FL_CR | GAGAAGCAGGAAAAGGAATTCGAATTGCCGAAAATTACATGCTACGTTAA | [1847] |
| lakei_Taunt_8_MA_TR | GAGAAGCAGGRAAAGGAATTCGAATTGCCGAAAATTACMTGCTACGTTAA | [1847] |
| lakei_Taunt_9_MA_TR | GAGAAGCAGGGAAAGGAATTCGAATTGCCGAAAATTACATGTTACGTTAA | [1847] |
| luggeri_NWT | GGGAAACAGGAAAAGGAATTCGAACTGCCGAAAATTACCTGCTACGTTAA | [1847] |
| luggeri_NE_FR | GGGAAACAGSAAAAGGARTTCGAAYTGCCGAAAATTACCTGCTACGTTAA | [1847] |
| luggeri_NC_HR | GGGAAACAGGAAAAGGAATTCGAATTGCCGAAAATTACCTGCTACGTTAA | [1847] |
| luggeri_KY_GR3 | GGGAAGCAAGAAAAGGAATTCGAATTGCCGAAAATTACCTGCTACGTTAA | [1847] |
| 'notiale AL BC5+6' | GAGAATCAGGAAAAAGAATTCGAATTGCCGAAAATTACATGCTACGTTAA | [1847] |
| notiale_VA_RR | GAAAAGCAGGAAAAGGAATTCGAATTGCCGAAAATTACATGCTACGTTAA | [1847] |
| notiale_TN_CC | GAGAAGCAGGAAAAGGAATTTGAATTGCCGAAAATTACATGCTACGTTAA | [1847] |
| notiale_SC_RBC | GARAAGCAGGAAAAGGAATTCGAATTGCCRAAAATTACATGMTACGTTAA | [1847] |
| 'notiale AL BC6+6' | GAGAAGCACGAAAAGGAATTTGAATTGCCGAAAATTACATGCTACGTTAA | [1847] |
| nyssa_AL_BC | GAAAAGCAGGAAAAGGAATTCGAATTACCGAAAATTACATGCTTCGTTAA | [1847] |
| nyssa_ME_AR | GAAAAGCAGGAAAAGGAATTCGAATTGCCGAAAATTACATGCTTCGTTAA | [1847] |
| nyssa_VA_RR | GAAAAGCAGGAAAAGCAATTCGAATTGCCGAAAATTACATGCTTCGTTAA | [1847] |
| nyssa_ME_PR | GAAAAGCAGGAAAAGGAATTCGAATTRCCGAAAATTACATGCTTCGTTAA | [1847] |
| nyssa_NC_TR | GAAAGGCAGGAAAAGGAATTCGAATTGCCGAAAATTACATGCTTCGTTAA | [1847] |
| ozarkense_MO_GR2 | GAGAAGCAGGAAAAGGAATTYGAATTGCCGAAAATTACATGCTACGTTAA | [1847] |
| ozarkense_MO_GR1 | GAGAAGCAGGAAAAGGAATTCGAATTGCCGAAAATTACCTGCTACGTTAA | [1847] |
| penobsco_ME_PR1 | GAAAAGCAGGAAAAGGAATTCGAATTGCCGAAAATTACATGCTACGTTAA | [1847] |
| penobsco_ME_PR2 | GAAAAGCAGGAAAAGGAATTCGAATTGCCGAAAATTACATGCTACGTTAA | [1847] |
| podostemi_NC_TR | GAGAAGCACGAAAAGGAATTCGAATTGCCGAAAATTACGTGCTACGTTAA | [1847] |
| podostemi_GA_AS | GAGAAGCACGAAAAGGAATTCGAATTGCCGAAAATTACGTGCTACGTTAA | [1847] |
| podostemi_MS_BC | GAGAAGCACGAAAAGGAATTCGAATTGCCGAAAATTACGTGCTACGTTAA | [1847] |
| podostemi_GA_CR | GAGAAGCACGAAAAGGAATTCGAATTGCCGAAAATTACGTGCTACGTTAA | [1847] |
| remissum_NC_NR2 | GAGAAGCAGGAAAAAGAATTCGAATTGCCGAAAATTACGTGCTACGTTAA | [1847] |
| remissum_NC_NR1 | GAGAAGCAGGAAAAGGAATTCGAATTGCCGAAAATTACGTGCTACGTTAA | [1847] |
| remissum_NC_NR3 | GAGAAGCAGGAAAAGGAATTCGAATTGCMGAAAATTACGTGCTACGTTAA | [1847] |
| 'snowi AL BC 4+6' | GAGAAGCACGAAAAGGAATTTGAATTGCCGAAAATTACATGCTACGTTAA | [1847] |
| snowi_TN_CC | GAGAAGCACGAAAAGGAATTYGAATTGCCGAAAATTACATGCTACGTTAA | [1847] |
| 'snowi AL BC 4+4' | GAGAATCAGGAAAAGGAATTCGAACTGCCGAAAATTACATGCTACGTTAA | [1847] |
| taxodium_GA_CC2 | GAGAAGCAGGAAAAGGAATTCGAATTGCCGAAAATTACATGYTACGTTAA | [1847] |
| taxodium_FL_CR | GAGAAGCAGGAAACGGAATTYGAATTGCCGAAAATTACATGTTACGTTAA | [1847] |
| underhilli_AL_HC3 | GAGAATCAGGAAAAGGAATTCGAATTGCCGAAAATTACATGCTACGTTAA | [1847] |
| underhilli_GA_FR | GAGAAKCAGGAAAAGGAATTCGAATTGCCGAAAATTACATGCTACGTTAA | [1847] |
| underhilli_GA_FS | GAGAAGCAGGAAAAGGAATTCGAATTGCCGAAAATTACATGCTACGTTAA | [1847] |

| | | |
|---|---|---|
| tuberosum | AAAGGGATTGATCGAGAGCGCATTGGCGTTTATTTGGACATTGAAGAAGG | [1900] |
| verecundum | AAAAGGATTGATCGAGAACGCCTTGGCGTATATCTGGACATTGAAGAAAG | [1734] |
| decimatum | ---------- | [1218] |
| apricarium | AAAAGGATTGATCGAAAATGCATTGGCGTTCATTTGGACATTGAAGAAGG | [1897] |
| reptans | AAAAGGATTGATCGAGAACGCWTTGGCKTTCATTTGGACATTGAAGAAGG | [1897] |

Appendix 1. (Cont.)

| Taxa | Sequence | Base # |
|---|---|---|
| anchist_AL_HC | AAAAGGACTGGTGGAAAATGCATTGGCATTCATTTGGACACTAAAGAAGG | [1897] |
| anchist_DE_DR | AAAAGGACTGGTGGAAAATGCATTGGCATTCATTTGGACACTRAAGAAGG | [1897] |
| anchist_ME_AR | AAAAGGACTGGTGGAAAATGCATTGGCATTCATTTGGACACTGAAGAAGG | [1897] |
| anchist_NC_NR | AAAAGGACTGGTGGAAAATGCATTGGCATTCATTTGGACACTGAAGAAGG | [1897] |
| anchist_ME_KR | AAAAGGACTGGTGGARAATGCATTGGCATTCATTTGGACACTGAAGAARG | [1897] |
| aranti_GA_FS | AAAAGGACTGATTGAGAATGCATTGGCATTCATTTGGACACTGAAGAAGG | [1897] |
| aranti_GA_AS | AAAAGGACTGATTGAGAATGCATTGGCATTCATTTGGACACTGAAGAAGG | [1897] |
| aranti_AL_HC | AAAAGGACTGATTGAGAATGCATTGGCATTCATTTGGACACTGAAGAAGG | [1897] |
| aranti_SC_LR | AAAAGGACTGATTGAGAATGCATTGGCATTCATTTGGACACTGAAGAAGG | [1897] |
| chlorum_NC_GC3 | AAAAGGACTGGTGGAGAATGCATTGGCGTTCATTTGGACACTGAAGAAAG | [1897] |
| chlorum_NC_GC1 | AAAAGGACTGGTGGAGAATGCATTGGCGTTCATTTGGACATTGAAGAAGG | [1897] |
| chlorum_NC_GC4 | AAAAGGACTGGTGGAGAATGCATTGGCGTTCATTTGGACATTGAAGAAGG | [1897] |
| confusum_TN_LR | AAAAGGACTGGTGGAGAATGCATTGGCGTTCATTTGGACATTGAAGAAGG | [1897] |
| confusum_GA_GC | AAAAGGACTGGTGGAGAATGCATTGGCGTTCATTTGGACATTGAAGAAGG | [1897] |
| confusum_GA_EC | AAAAGGACTGGTGGAGAATGCATTGGCGTTCATTTGGACCTTGAAGAAGG | [1897] |
| confusum_TX_SJR | AAAAGGACTGGTGGAGAATGCATTGGCGTTCATTTGGACATTGAAGAAAG | [1897] |

| | | |
|---|---|---|
| confusum_TX_SR | AAAAGGACTGGTGGAGAATGCATTGGCGTTCATTTGGACACTGAAGAAAG | [1897] |
| confusum_TX_Bayou | AAAAGGACTGGTAGAGAATGCATTGGCGTTCATTTGGACATTGAAGAAGG | [1897] |
| definitum_PA_LC | AAAAGGACTGGTGGAGAATGCATTGGCGTTCATTTGGACACTGAAGAAGG | [1897] |
| definitum_SC_GC | AAAAGGACTGGTGGAGAATGCATTGGCGTTCATTTGGACACTGAAGAAGG | [1897] |
| dixiense_GA_WC | AAAAGGACTGGTGGAGAATGCATTGGCCTTCATTTGGACCCTGAAGAAAG | [1897] |
| dixiense_SC_LBC | AAAAGGACTGGTGGAGAATGCATTGGCCTTCATTTGGACCCTGAAGAAAG | [1897] |
| dixiense_NC_QC | AAAAGGACTGGTGGAGAATGCATTGGCCTTCATTTGGACCCTGAAGAAAG | [1897] |
| dixiense_FL_CC | AAAAGGACTGGTGGAGAATGCATTGGCCTTCATTTGGACCCTGAAGAAAG | [1897] |
| fibrinflatum_PA_DR | AAAAGGACTGGTGGAGAATGCATTGGCGTTCATTTGGACCCTGAAGAAGG | [1897] |
| fibrinflatum_ME_AR | AAAAAGACTTGTGGAGAATGCACTAGCGTTCATTTGGACCCTGAAGAAGG | [1897] |
| fibrinflatum_GA_FR | AAAAGGACTGGTGGAGAATGCATTGGCGTTCATTTGGACCCTGAAGAAGG | [1897] |
| haysi_AL_BCC3 | AAAAGGACTGGTGGAGAATGCATTGGCGTTCATTTGGACATTGAAGAAGG | [1897] |
| haysi_TX_SJR | AAAAGGACTGGTGGAGAATGCATTGGCGTTCATTTGGACATTGAAGAAGG | [1897] |
| infenestrum_NC_RR | AAAAGGACTAGTGGAAAATGCATTGGCATTCATTTGTACACTGAAGAAGG | [1897] |
| infenestrum_SC_RBC | AAAAGGACTAGTGGAAAATGCATTGGCATTCATTTGTACACTGAAGAAGG | [1897] |
| jenningsi_TN_PR | AAAAGGACTGGTGGAGAATGCATTGGCGTTCATTTGGACACTGAAGAAGG | [1897] |
| jenningsi_NC_ER | AAAAGGACTGGTGGAGAATGCATTGGCGTTCATTTGGACACTGAAGAAGG | [1897] |
| jenningsi_SC_FC | AAAAGGACTGGTGGAGAATGCATTGGCGTTCATTTGGWCACTGAARAAGG | [1897] |
| jenningsi_PA_BR | AAAAGGACTGGTGGAGAATGCATTGGCGTTCATTTGGACACTGAAGAAGG | [1897] |
| jenningsi_GA_AR | AAAAGGACTGGTGGAGAATGCATTGGCGTTCATTTGGTCACTGAAGAAGG | [1888] |
| jonesi_FL_CC1 | AAAAGGACTGGTGGAGAATGCATTGGCGTTCATTTGGGCATTGAAGAAGG | [1897] |
| jonesi_AL_BCC | AAAAGGACTGGTGGAGAATGCATTGGCGTTCATTTGGACAYTAAAGAAGG | [1897] |
| jonesi_NC_CC | AAAAGGACTTGTGGAGAATGCATTGGCGTTCATTTGGACATTRAAGAAGG | [1897] |
| jonesi_NC_QC | AAAAGGACTTGTGGAGAATGCATTGGCGTTCATTTGGACATTRAAGAAGG | [1897] |
| jonesi_GA_WC | AAAAGGACGTGTGGAGAATGCATTGGCGTTCATTTGGACATTGAAGAAGG | [1897] |
| krebsorum_NC_MC | AAAAGGAATGGTGGAGAATGCATTGGCGTTCATTTGGGCACTGAAGAAGG | [1897] |
| krebsorum_SC_CC2 | AAAAGGAATGGTGGAGAATGCATTGGCGTTCATTTGGGCACTGAAGAAGG | [1897] |
| lakei_PA_NC | AAAAGGACTGGTGGAGAATGCATTGGCGTTCATTTGGACATTGAAGAAGG | [1897] |
| lakei_SC_BR | AAAAGGACTGGTGGAGAATGCATTGGCGTTCATTTAGACATTGAAGAAGG | [1897] |
| lakei_FL_CR | AAAAGGACTGGTGGAGAATGCATTGGCGTTCATTTGGACATTGAAGAAGG | [1897] |
| lakei_Taunt_8_MA_TR | AAAAGGACTGGTGGAGAATGCATTGGCGTTCATTTGGACATTGAAGAAGG | [1897] |
| lakei_Taunt_9_MA_TR | AAAAGGACTGGTGGAGAATGCATTGGCGTTCATTTGGACATTGAAGAAGG | [1897] |
| luggeri_NWT | AAAAGGACTGGTGGAGAATGCATTGGCGTTCATTTGGACACTCAAAAAGG | [1897] |
| luggeri_NE_FR | AAAAGGACTGGTGGAGAATGCATTGGCGTTCATTTGGACACTSAAAAAGG | [1897] |
| luggeri_NC_HR | AAAAGGACTGGTGGAGAATGCATTGGCGTTCATTTGGACACTGAAAAAGG | [1897] |
| luggeri_KY_GR3 | AAAAGGACTGGTGGAGAATGCATTGGCGTTCATTTGGACACTGAAGAAGG | [1897] |
| 'notiale AL BC5+6' | AAAAGGACTGGTGGAGAATGCATTGGCGTTCATTTGGACCCTGAAGAAGG | [1897] |
| notiale_VA_RR | AAAAGGACTGGTGGAAAATGCATTGGCGTTCATTTGGACACTGAAGAAGG | [1897] |
| notiale_TN_CC | AAAAAGACTGGTGGAGAATGCACTAGCGTTCATTTGGACCCTGAAGAAGG | [1897] |
| notiale_SC_RBC | AAAAGGACTGGTGGAAAATGCATTGGCGTTCATTTGGACACTGAAGAAGG | [1897] |
| 'notiale AL BC6+6' | AAAAGGATTGGTGGAGAATGCATTGGCGTTCATTTGGACACTAAAGAAGG | [1897] |
| nyssa_AL_BC | AAAAGGACTGGTGGAAAATGCATTGGCATTCATTTGGACACTGAAGAAGG | [1897] |
| nyssa_ME_AR | AAAAGGACTGGTGGAAAATGCATTGGCATTCATTTGGACACTGAAGAAGG | [1897] |
| nyssa_VA_RR | AAAAGGACTGGTGGAAAATGCATTGGCATTCATTTGGACACTGAAGAAGG | [1897] |
| nyssa_ME_PR | AAAAGGACTGGTGGAAAATGCATTGGCATTCATTTGGACACTGAAGAAGG | [1897] |
| nyssa_NC_TR | AAAAGGACTGGTGGAAAATGCATTGGCATTCATTTGGACACTGAAGAAGG | [1897] |

Appendix 1. (Cont.)

| Taxa | Sequence | Base # |
|---|---|---|
| ozarkense_MO_GR2 | AAAAGAACTAGTGGAGAATGCATTGGCCTTCATTTGGACATTGAAGAAGG | [1897] |
| ozarkense_MO_GR1 | AAAAGGACTAGTGGAGAATGCATTGGCGTTCATTTGGACATTGAAGAAGG | [1897] |
| penobsco_ME_PR1 | AAAAGGACTAGTGGAAAATGCATTGGCATTCATTTGTACACTGAAGAAGG | [1897] |
| penobsco_ME_PR2 | AAAAGGACTAGTGGAAAATGCATTGGCATTCATTTGTACACTGAAGAAGG | [1897] |
| podostemi_NC_TR | AAAAGGACTGGTGGAGAATGCATTGGCATTCATTTGGACACTGAAGAAGG | [1897] |
| podostemi_GA_AS | AAAAGGACTGGTGGAGAATGCATTGGCATTCATTTGGACACTGAAGAAGG | [1897] |
| podostemi_MS_BC | AAAAGGACTGGTGGAGAATGCATTGGCATTCATTTGGACACTGAAGAAGG | [1897] |
| podostemi_GA_CR | AAAAGGACTGGTGGAGAATGCATTGGCATTCATTTGGACACTGAAGAAGG | [1897] |
| remissum_NC_NR2 | AAAAGGACTGGTGGAGAATGCATTGGCATTCATTTGGACACTGAAGAAGG | [1897] |
| remissum_NC_NR1 | AAAAGGACTGGTGGAGAATGCATTGGCATTCATTTGGACACTGAAGAAGG | [1897] |
| remissum_NC_NR3 | AAAAGGACTGGTGGAGAATGCATTGGCATTCATTTGGACACTGAAGAAGG | [1897] |
| 'snowi AL BC 4+6' | AAAAGGATTGGTGGAGAATGCATTGGCGTTCATTTGGACACTAAAGAAGG | [1897] |
| snowi_TN_CC | AAAAGGACTGGTGGAGAATGCATTAGCGTTCATTTGGACCCTAAAGAAGG | [1897] |
| 'snowi AL BC 4+4' | AAAAGAACTGGTGGAGAATGCATTGGCGTTCATTTGGACCCTGAAGAAGG | [1897] |
| taxodium_GA_CC2 | AAAAGGACTGGTRGAGAATGCATTGGCGTTCATTTGGACATTGAAGAARG | [1897] |
| taxodium_FL_CR | AAAAGGACTGGTGGAGAATGCATTGGCGTTCATTTGGACATTGAAGAAGG | [1897] |
| underhilli_AL_HC3 | AAAAGGACTGGTGGAGAATGCATTGGCGTTCATTTGGACCCTAAAGAAGG | [1897] |
| underhilli_GA_FR | AAAAGGACTGGTGGAGAATGCATTGGCGTTCATTTGGACACTGAAGAAGG | [1897] |
| underhilli_GA_FS | AAAAGGATTGGTGGAGAATGCATTAGCGTTCATTTGGACACTGAAGAAGG | [1897] |

| | | |
|---|---|---|
| tuberosum | CCGAATCGAATGCGAAAGCGGAACAATCGCTCAAATATCTTCTCTACCTG | [1950] |
| verecundum | CCGAATCGAACCTTAAAGCGGAACAGTCGCTCAAGTATCTTCTCTACCTG | [1784] |
| decimatum | ---------- | [1218] |
| apricarium | CCGAATCGAATGTGAAAGCGGAACAGTCGCTCAAATATCTTCTCTACCTG | [1947] |
| reptans | CCGAATCRAATGTGAAAGCTGAACAGTCGCTCAARTATCTTCTCTACCTG | [1947] |
| anchist_AL_HC | CAGAATCGAATCAGAAAGCGGAACAGTCGCTCAAATACCTTCTCTACCTG | [1947] |
| anchist_DE_DR | CAGAATCGAATCAGAAAGCGGAACAGTCGCTCAAATACCTTCTCTACCTG | [1947] |
| anchist_ME_AR | CAGAATCGAATCAGAAAGCGGAACAGTCGCTCAAATACCTTCTCTACCTG | [1947] |
| anchist_NC_NR | CAGAATCGAATCAGAAAGCGGAACAGTCGCTCAAATACCTTCTCTACCTG | [1947] |
| anchist_ME_KR | CAGAATCKAATCAGAAAGCGGAACAGTCGCTCAAATACCTTCTCTACCTG | [1947] |
| aranti_GA_FS | CAGAATCGAATCAGAAAGCGGAACAGTCGCTCAAATACCTTCTCTACCTG | [1947] |
| aranti_GA_AS | CAGAATCGAATCAGATAGCGGAACAGTCGCTCAAATACCTTCTCTACCTG | [1947] |
| aranti_AL_HC | CAGAATCGAATCAGAYAGCGGAACAGTCGCTCAAATACCTTCTCTACCTG | [1947] |
| aranti_SC_LR | CAGAATCGAATCAGAAAGCGGAACAGTCGCTCAAATACCTTCTCTACCTG | [1947] |
| chlorum_NC_GC3 | CAGAATCGAATCAAAAAACGGAACAGTCGCTCAAATACCTTCTCTACCTG | [1947] |
| chlorum_NC_GC1 | CAGAATCGAATCAGAAAGCGGAACAGTCTCTCAAATACCTTCTCTACCTG | [1947] |
| chlorum_NC_GC4 | CAGAATCGAATCAGAAAGCGGAACAGTCGCTCAAATACCTTCTCTACTTG | [1947] |
| confusum_TN_LR | CAGAATCGAATCAAAAAGCGGAACAGTCGCTCAAATACCTTCTCTACTTG | [1947] |
| confusum_GA_GC | CAGAATCGAATCAGAAAGCGGAACAGTCGCTCAAATACCTTCTCTACCTG | [1947] |
| confusum_GA_EC | CAGAATCGAATCAGAAAGCGGAACAGTCGCTCAAGTATCTTCTCTACTTG | [1947] |
| confusum_TX_SJR | CAGAAKCGAATCARAAAGCGGAACAGTCGCTCAAATACCTTCTCTACYTG | [1947] |
| confusum_TX_SR | CAGAATCGAATCAGAAAGCGGAACAGTCGCTTAAATACCTTCTCTACCTG | [1947] |
| confusum_TX_Bayou | CAGAATCGAATCAGAAAGCGGAACAGTCGCTCAAATACCTTCTMTACTTG | [1947] |
| definitum_PA_LC | CAGAATCGAATCAGAAAGCGGAACAGTCGCTCAAATACCTTCTCTACTTG | [1947] |
| definitum_SC_GC | CAGAATCGAATCAGAAAGCGGAACAGTCGCTCAAATACCTTCTCTACTTG | [1947] |
| dixiense_GA_WC | CAGAATCGCATCAGAAAGCGGAACAGTCACTCAAATACCTTCTCTACTTG | [1947] |
| dixiense_SC_LBC | CAGAATCGCATCAGAAAGCGGAACAGTCACTCAAATACCTTCTCTACTTG | [1947] |
| dixiense_NC_QC | CAGAATCGCATCAGAAAGCGGAACAGTCACTCAAATACCTTCTCTACTTG | [1947] |
| dixiense_FL_CC | CAGAATCGCATCAGAAAGCGGAACAGTCACTCAAATACCTTCTCTACTTG | [1947] |
| fibrinflatum_PA_DR | CAGAATCGAATCAGAAAGCTGAACAGTCGCTCAAATACCTTCTTTACCTG | [1947] |
| fibrinflatum_ME_AR | CAGAATCGAATCAGAAAGCTGAACAGTCGCTCAAATACCTTCTCTACCTG | [1947] |
| fibrinflatum_GA_FR | CAGAATCTAATCAGAAAGCGGAACAGTCRCTCAAATAYCTTCTCTACCTG | [1947] |
| haysi_AL_BCC3 | CAGAATCGAATCAGAAAGCGGAACAGTCGCTCAAGTATCTTCTCTACTTA | [1947] |
| haysi_TX_SJR | CAGAATCGAATCAGAAAGCGGAACAGTCGCTCAAGTATCTTCTCTACTTA | [1947] |
| infenestrum_NC_RR | CAGAATCGATTCAGAAAGCTGAACAGTCGCTCAAATACCTTCTCTACCTG | [1947] |
| infenestrum_SC_RBC | CAGAATCGATTCAGAAAGCTGAACAGTCGCTCAAATACCTTCTCTACCTG | [1947] |
| jenningsi_TN_PR | CAGAATCGAACCAGAAAGCTGAACAGTCACTCAAATACCTTCTTTACCTG | [1947] |
| jenningsi_NC_ER | CAGAATCGAATCAGAAAGCTGAACAGTCACTCAAATACCTTCTCTACCTG | [1947] |
| jenningsi_SC_FC | CAGAATCGAAYCAGAAAGCTGAACAGTCACTCAAATACCTTCTCTACCTG | [1947] |
| jenningsi_PA_BR | CAGAATCGAATCAGAAAGCTGAACAGTCGCTCAAATACCTTCTCTACCTG | [1947] |

Appendix 1. (Cont.)

| Taxa | Sequence | Base # |
|---|---|---|
| jenningsi_GA_AR | CAGAATCGAACCAGAAAGCTGAACAGTCACTCAAATACCTTCTCTACCTG | [1938] |
| jonesi_FL_CC1 | CAGAATCGAATCAGAAGGCGGAACAGTCGCTCAAGTAYCTTCTCTACTTG | [1947] |
| jonesi_AL_BCC | CAGAATCGAATCAGAAGGCGGAAGAGTCGCTCAAGTATCTTCTCTACTTG | [1947] |
| jonesi_NC_CC | CAGAATCGAATCAGAAAGCGGAACAGTCGCTCAAATAYCTTCTCTACYTG | [1947] |
| jonesi_NC_QC | CAGAATCGAATCAGAARGCGGAACAGTCGCTCAARTAYCTTCTCTACTTG | [1947] |
| jonesi_GA_WC | CAGAATCGAATCAGAAGGCAGAACAGTCGCTCAAGTATCTTCTCTACTTG | [1947] |
| krebsorum_NC_MC | CAGAATCGAATCAGAAAGCGGAACAGTCGCTCAAATACCTTCTCTACCTG | [1947] |
| krebsorum_SC_CC2 | CAGAATCGAATCAGAAAGCGGAACAGTCGCTCAAATACCTTCTCTACCTG | [1947] |
| lakei_PA_NC | CAGAATCGAATCAGAAAGCGGAACAGTCGCTCAAATACCTTCTCTACCTG | [1947] |
| lakei_SC_BR | CAGAATCGAATCAGAAAGCGGAACAGTCGCTCAATTACCTTCTCTACCTG | [1947] |
| lakei_FL_CR | CAGAATCGAATCAGAAAGCGGAACAGTCGCTCAAATACCTTCTCTACCTG | [1947] |
| lakei_Taunt_8_MA_TR | CAGAATCGAATCAGRAAGCGGAACAGTCGCTCAAATACCTTCTCTACYTG | [1947] |
| lakei_Taunt_9_MA_TR | CAGAATCGAATCAGAAAGCGGAACAGTCGCTYAAATACCTTCTCTACTTG | [1947] |
| luggeri_NWT | CAGAATCGAATCAGAAAGCGGAACAATCGCTCAAATACCTTCTCTACCTG | [1947] |
| luggeri_NE_FR | CAGAATCGAATCAGAAAGCGGAACARTCGCTCAAATACCTTCTCTACCTG | [1947] |
| luggeri_NC_HR | CAGAATCGAATCAGAAAGCGGAACAGTCGCTCATATACCTTCTCTACCTG | [1947] |
| luggeri_KY_GR3 | CAGAATCGAATCAGAAAGCGGAACAGTCGCTCAAATACCTTCTCTACTTG | [1947] |
| 'notiale AL BC5+6' | CAGAATCTAATCAGAAAGCGGAACAGTCGCTCAAATACCTTCTCTACCTG | [1947] |
| notiale_VA_RR | CAGAATCGAATCAGAAAGCTGAACAGTCGCTCAAATACCTTCTTTACCTG | [1947] |
| notiale_TN_CC | CAGAATCKAATCAGAAAGCTGAACAGTCGCTCAAATACCTTCTCTACCTG | [1947] |
| notiale_SC_RBC | CAGAATCRAATCAGAAAGCTGAACAGTCGCTCAAATACCTTCTTTACCTG | [1947] |
| 'notiale AL BC6+6' | CAGAATCTAATCAAAAAGCGGAACAGTCGCTCAAATACCTTCTCTACCTG | [1947] |

| | | |
|---|---|---|
| nyssa_AL_BC | CAGAATCGAATCAGAAAGCGGAACAGTCGCTCAAATACCTTCTCTACCTG | [1947] |
| nyssa_ME_AR | CAGAATCGAATCAGAAAGCGGAACAGTCGCTCAAATACCTTCTCTACCTG | [1947] |
| nyssa_VA_RR | CAGAATCGAATCAGAAAGCGGAACAGTCGCTCAAATACCTTCTCTACCTG | [1947] |
| nyssa_ME_PR | CAGAATCGAATCAGAAAGCGGAACAGTCGCTCAAATACCTTCTCTACCTG | [1947] |
| nyssa_NC_TR | CAGAATYGAATCAGAAAGCGGAACAGTCGCTCAAATACCTTCTCTACCTG | [1947] |
| ozarkense_MO_GR2 | CAGAATCGAATCAGAAAGCGGAGCAGTCGCTCAAGTATCTTCTCTACCTG | [1947] |
| ozarkense_MO_GR1 | CAGAATCGAATCAGAAAGCGGAGCAGTCGCTCAAGTATCTTCTCTACCTG | [1947] |
| penobsco_ME_PR1 | CAGAATCGATTCAGAAAGCTGAACAGTCGCTCAAATACTTTCTCTACCTG | [1947] |
| penobsco_ME_PR2 | CAGAATCGATTCAGAAAGCTGAACAGTCGCTCAAATACCTTCTCTACCTG | [1947] |
| podostemi_NC_TR | CAGAATCGAATCAGAAAGCTGAACAGTCCCTCAAATACCTTCTCTACCTG | [1947] |
| podostemi_GA_AS | CAGAATCGAATCAGAAAGCTGAACAGTCCCTCAAATACCTTCTCTACTTG | [1947] |
| podostemi_MS_BC | CAGAATCGAATCAGAAAGCTGAACAGTCCCTCAAATACCTTCTCTACCTG | [1947] |
| podostemi_GA_CR | CAGAATCGAATCAGAAAGCTGAACAGTCCCTCAAATACCTTCTCTACCTG | [1947] |
| remissum_NC_NR2 | CAGAATCGATTCAGAAAGCTGAACAGTCGCTCAAATACCTTCTCTACCTG | [1947] |
| remissum_NC_NR1 | CAGAATCGATTCAGAAAGCTGAACAGTCGCTCAAATACCTTCTCTACCTG | [1947] |
| remissum_NC_NR3 | CAGAATCGATTCAGAAAGCKGAACAGTCGCTCAAATACCTTCTCTACCTG | [1947] |
| 'snowi AL BC 4+6' | CAGAATCTAATCAAAAAGCGGAACAGTCGCTCAAATACCTTCTCTACCTG | [1947] |
| snowi_TN_CC | CAGAATCTAATCAAAAAGCGGAACAGTCGCTCAAATAYCTTCTSTACCTG | [1947] |
| 'snowi AL BC 4+4' | CAGAATCTAATCAGAAAGCGGAACAGTCGCTCAAATATCTTCTCTACCTG | [1947] |
| taxodium_GA_CC2 | CAGAATCGAATCAGAAAGCGGAACAGTCGCTCAAATACCTTCTCTACTTG | [1947] |
| taxodium_FL_CR | CAGAATCGAATCAGAAAGCGGAACAGTCGCTCAAATACCTTCTCTACCTG | [1947] |
| underhilli_AL_HC3 | CAGAATCGAATCAGAAAGCKGAACAGTCGCTCAAATACCTTCTCTACCTG | [1947] |
| underhilli_GA_FR | CAGAATCGAATCAGAAAGCGGAACAGTCGCTCAAATACCTTCTCTACCTG | [1947] |
| underhilli_GA_FS | CAGAATCGAATCAGAAAGCTGAACAGTCGCTCAAATACCTTCTCTACCTG | [1947] |

| | | |
|---|---|---|
| tuberosum | GTGGACGTCAACCAGCTGTACAAT | [1974] |
| verecundum | GTGGACATCAATCAGCTGTACAAC | [1808] |
| decimatum | ------------------------ | [1218] |
| apricarium | GTGGACGTCAATCAGCTGTACAAC | [1971] |
| reptans | GTGGACGTCAATCAGCTGTTCAAC | [1971] |
| anchist_AL_HC | GTGGACGTCAACCAGCTATACAAC | [1971] |
| anchist_DE_DR | GTGGACGTCAACCAGCTATACAAC | [1971] |
| anchist_ME_AR | GTGGACGTCAACCAGTTATACAAC | [1971] |
| anchist_NC_NR | GTGGACGTCAACCAGCTATACAAC | [1971] |
| anchist_ME_KR | GTGGACGTCAACCAGCTATACAAC | [1971] |
| aranti_GA_FS | GTGGACGTCAACCAGCTATACAAC | [1971] |
| aranti_GA_AS | GTGGACGTCAACCAGCTATACAAC | [1971] |
| aranti_AL_HC | GTGGACGTCAACCAGCTATACAAC | [1971] |

Appendix 1. (Cont.)

| Taxa | Sequence | Base # |
|---|---|---|
| aranti_SC_LR | GTGGACGTCAACCAGCTATACAAC | [1971] |
| chlorum_NC_GC3 | GTGGACGTCAACCAGCTATATAAC | [1971] |
| chlorum_NC_GC1 | GTGGACGTCAACCAGCTATACAAC | [1971] |
| chlorum_NC_GC4 | GTGGACGTCAACCAGCTATACAAY | [1971] |
| confusum_TN_LR | GTGGACGTCAACCAGCTATACAAC | [1971] |
| confusum_GA_GC | GTGGACGTCAACCAGCTTTACAAC | [1971] |
| confusum_GA_EC | GTGGACGTCAACCAGCTATACAAC | [1971] |
| confusum_TX_SJR | GTGGACGTCAWCCAGCTATAYAAC | [1971] |
| confusum_TX_SR | GTGGACGTCAACCAGCTATACAAC | [1971] |
| confusum_TX_Bayou | GTGGACGTSAACCAGCTATACAAC | [1971] |
| definitum_PA_LC | GTGGACGTCAACCAGCTATACAAC | [1971] |
| definitum_SC_GC | GTGGACGTCAACCAGCTATACAAC | [1971] |
| dixiense_GA_WC | GTGGACGTGAACCAACTATACAAC | [1971] |
| dixiense_SC_LBC | GTGGACGTGAACCAACTATACAAC | [1971] |
| dixiense_NC_QC | GTGGACGTGAACCAACTATACAAC | [1971] |
| dixiense_FL_CC | GTGGACGTGAACCAACTATACAAC | [1971] |
| fibrinflatum_PA_DR | GTGGACGTCAACCAGCTTTACAAC | [1971] |
| fibrinflatum_ME_AR | GTGGACGTCAACCAGCTTTACAAC | [1971] |
| fibrinflatum_GA_FR | GTGGACGTCAACCAGCTATACAAC | [1971] |
| haysi_AL_BCC3 | GTGGACGTCAACCAGCTATACAAC | [1971] |
| haysi_TX_SJR | GTGGACGTCAACCAGCTATACAAC | [1971] |
| infenestrum_NC_RR | GTGGACGTCAACCAACTATACAAT | [1971] |
| infenestrum_SC_RBC | GTGGACGTCAACCAACTATACAAY | [1971] |
| jenningsi_TN_PR | GTGGACGTCAACCAGCTATACAAC | [1971] |
| jenningsi_NC_ER | GTGGACGTCAACCAGCTATACAAC | [1971] |

| | | |
|---|---|---|
| jenningsi_SC_FC | GTGGACGTCAACCAGCTATACAAC | [1971] |
| jenningsi_PA_BR | GTGGACGTCAATCAGCTATACAAC | [1971] |
| jenningsi_GA_AR | GTGGACGTCAACCAGCTATACAAC | [1962] |
| jonesi_FL_CC1 | GTGGAYGTGAACCAGTTATACAAC | [1971] |
| jonesi_AL_BCC | GTGGACGTCAACCAGCTATACAAC | [1971] |
| jonesi_NC_CC | GTGGACGTCAACCAGCTATACAAC | [1971] |
| jonesi_NC_QC | GTGGACGTGAACCAGCTATACAAC | [1971] |
| jonesi_GA_WC | GTGGACGTGAGCCAGCTATACAAT | [1971] |
| krebsorum_NC_MC | GTGGACGTCAACCAGCTTTACAAT | [1971] |
| krebsorum_SC_CC2 | GTGGACGTCAACCAGCTTTACAAT | [1971] |
| lakei_PA_NC | GTGGACGTCAACCAGCTATATAAC | [1971] |
| lakei_SC_BR | GTGGACGTCATCCAGCTATACAAC | [1971] |
| lakei_FL_CR | GTGGACGTCAACCAGCTATAYAAC | [1971] |
| lakei_Taunt_8_MA_TR | GTGGACGTCAACCAGCTATATAAC | [1971] |
| lakei_Taunt_9_MA_TR | GTGGACGTCAACCAGCTATATAAC | [1971] |
| luggeri_NWT | GTAGACGTCAACCAGCTATATAAC | [1971] |
| luggeri_NE_FR | GTAGACGTCAACCAGCTATATAAC | [1971] |
| luggeri_NC_HR | GTAGACGTCAACCAGCTATATAAC | [1971] |
| luggeri_KY_GR3 | GTGGACGTCAATCAGCTATATAAC | [1971] |
| 'notiale AL BC5+6' | GTGGACGTCAACCAGCTATACAAC | [1971] |
| notiale_VA_RR | GTGGACGTCAATCAGCTTTACAAC | [1971] |
| notiale_TN_CC | GTGGACGTCAACCAGCTATACAAC | [1971] |
| notiale_SC_RBC | GTGGACGTCAACCAGCTTTACAAC | [1971] |
| 'notiale AL BC6+6' | GTGGACGTCAACCAGCTATACAAC | [1971] |
| nyssa_AL_BC | GTGGACGTCAACCAGCTATACAAC | [1971] |
| nyssa_ME_AR | GTGGACGTCAACCAGCTATACAAC | [1971] |
| nyssa_VA_RR | GTGGACGTCAACCAGCTATACAAC | [1971] |
| nyssa_ME_PR | GTGGACGTCAACCAGCTATACAAC | [1971] |
| nyssa_NC_TR | GTGGACGTCAACCAGCTATACAAC | [1971] |
| ozarkense_MO_GR2 | GTGGACGTCAACCAGCTATACAAT | [1971] |
| ozarkense_MO_GR1 | GTAGACGTCAACCAGCTTTACAAT | [1971] |
| penobsco_ME_PR1 | GTGGACGTCAACCAACTATACAAY | [1971] |
| penobsco_ME_PR2 | GTGGACGTCAACCAACTATACAAT | [1971] |
| podostemi_NC_TR | GTGGACGTGAACCAGCTATACAAC | [1971] |
| podostemi_GA_AS | GTGGACGTGAACCAGCTATACAAC | [1971] |
| podostemi_MS_BC | GTGGACGTGAACCAGCTATACAAC | [1971] |
| podostemi_GA_CR | GTGGACGTGAACCAGCTATACAAC | [1971] |

Appendix 1. (Cont.)

| Taxa | Sequence | Base # |
|---|---|---|
| remissum_NC_NR2 | GTGGACGTCAACCAACTATACAAT | [1971] |
| remissum_NC_NR1 | GTGGACGTCAACCAACTATACAAT | [1971] |
| remissum_NC_NR3 | GTGGACGTCAACCAACTATACAAT | [1971] |
| 'snowi AL BC 4+6' | GTGGACGTCAACCAGCTATACAAC | [1971] |
| snowi_TN_CC | GTGGACGTCAACCAGCTATACAAC | [1971] |
| 'snowi AL BC 4+4' | GTGGACGTCAACCAGCTATACAAC | [1971] |
| taxodium_GA_CC2 | GTGGACGTCAACCAGCTATACAAC | [1971] |
| taxodium_FL_CR | GTGGACGTCAACCAGCTATACAAT | [1971] |
| underhilli_AL_HC3 | GTGGACGTCAACCAGCTATACAAC | [1971] |
| underhilli_GA_FR | GTGGACGTCAACCAGCTTTACAAC | [1971] |
| underhilli_GA_FS | GTGGACGTCAACCAGCTTTACAAC | [1971] |

## Vita

Gail was born in Michigan, raised in Texas, and attended high school in Virginia. Initially accepted to Virginia Tech for Electrical Engineering in 2005, Gail discovered while taking an elective class (Insects in Human Society) that it wasn't the right major for her. She graduated in 2009, with a Bachelors degree in Agricultural Science with minors in Entomology and Horticulture. The summer after graduation, she worked as a professional intern at Walt Disney World while deciding where to apply to continue her education.

She applied and was accepted by the University of Tennessee (Knoxville) and started in the Spring semester in 2010 with Dr. Moulton. In 2012, she had the opportunity to attend and present at the SEB/SWB joint ESA meeting in Little Rock, Arkansas.